

Manufacturers Record

Exponent of America



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AUGUST 11, 1921

A Leading Eastern Banker's Views of the Causes of the Breakdown of National Prosperity.

A leading Eastern banker, Mr. Edward C. Stokes, president of the Mechanics National Bank, of Trenton, N. J. in a remarkable letter published in this issue, arraigns the entire banking activities of the country, including the Federal Reserve Board, for the deflation and credit restriction campaign of the last two years, and charges them with responsibility for the enormous losses which have been brought upon the country by their unwise actions.

Mr. Stokes refers to the banking conditions of the last two years as merely a "pawn-broker's" business, against which the country must some day arise in protest. His views cannot be ignored, nor lightly set aside by the bankers of the country on the ground on which the Federal Reserve people undertake to discredit the criticisms made by anybody not a banker. Mr. Stokes is a banker of long standing, president of an outstanding, successful bank, and at the beginning of the deflation campaign he wrote a vigorous letter to the Manufacturers Record urgently protesting against the restriction of credits then under way, and warned the country of the certainty of the business depression which we have had since that campaign was inaugurated. Banking interests hold such a dominating control over the life of the business of the country that there can be no prosperity of the farmers, the merchants, and the manufacturers, and no profitable employment of labor, unless the banking business is wisely managed.

It is for this reason, and because the business life of this country is held absolutely within the power of its financial interests, dominated now by the Federal Reserve Board, that the Manufacturers Record has constantly sought to throw all possible light upon the whole situation. A power which holds within its grasp the ability to inflate and to deflate credits at its own sweet will and in secret; which has the power of life and death over every business industry in the country and over the ability of every man and woman living in America, and in that way tremendously affects for weal or woe the welfare of the entire world, needs to be discussed and studied from every angle.

We are especially glad, therefore, to be able to give the illuminating review of the situation by Mr. Stokes. We know that there are many bankers in the country who agree absolutely with the position taken by Mr. Stokes but who, out of the fear of the power of the Federal Reserve Board to crush them, dare not make their views public. On the other hand, there are many bankers so absolutely obsessed with the imaginary wisdom that rules the Federal Reserve Board and the various regional banks that they can see nothing wrong in the work which they have done and which has resulted in the fearful losses of the last two years in this country and in the breaking down of the world's prosperity.

We commend to every reader the striking presentation by President Stokes of what true banking should be.

It is interesting in this connection to mention that Mr. Stuyvesant Fish, vice president of the Park National Bank, New York, and former president of the Illinois Central Railroad, in a statement to the Manufacturers Record last year, used almost the exact language of President Stokes when he referred to the banking system of this country as "pawn-broking business," and not true banking.



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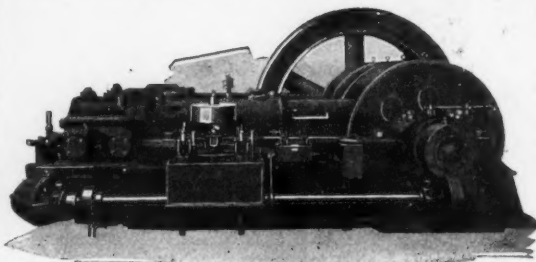
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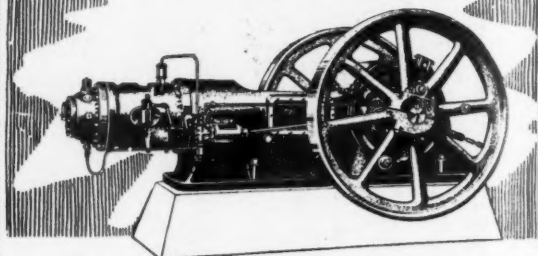
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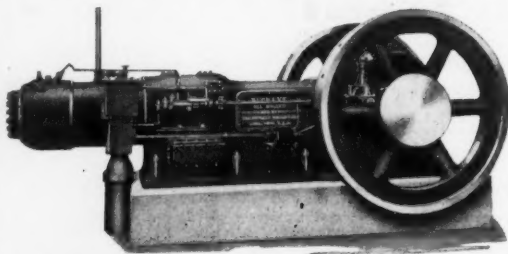


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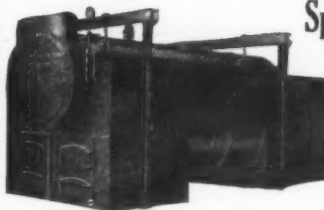
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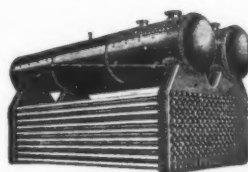
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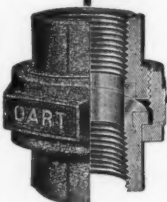
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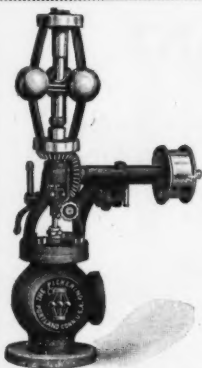
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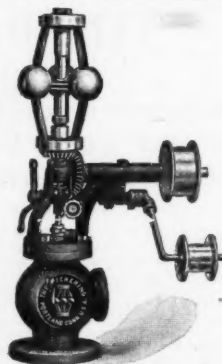
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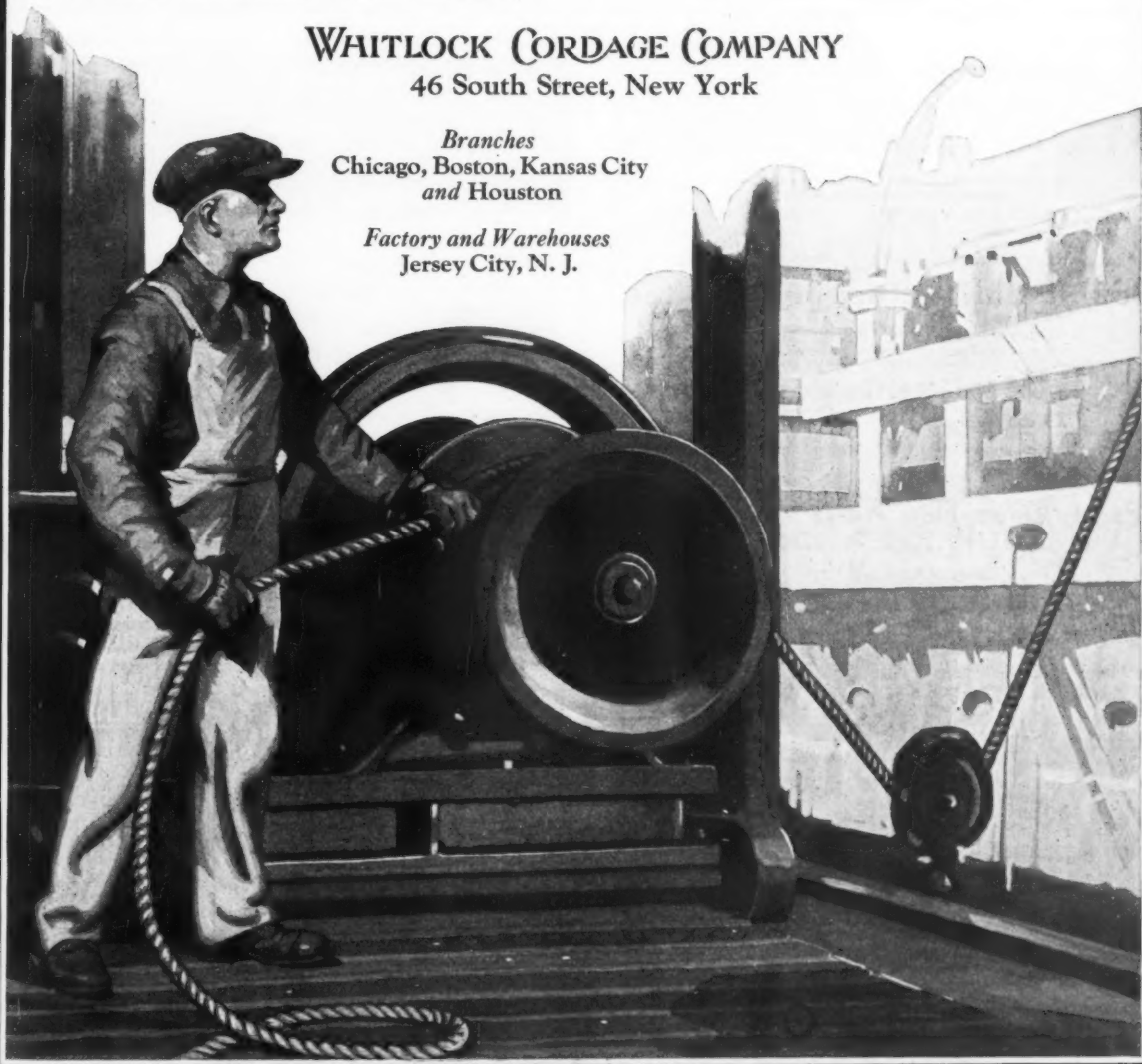
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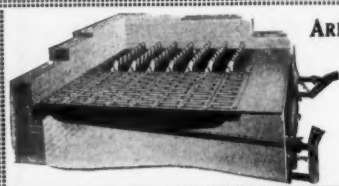
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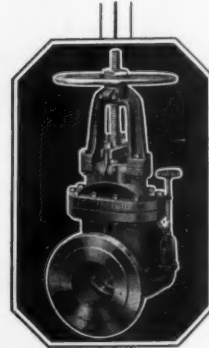
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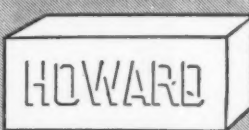
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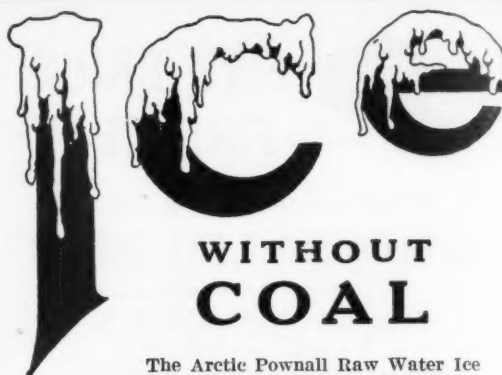
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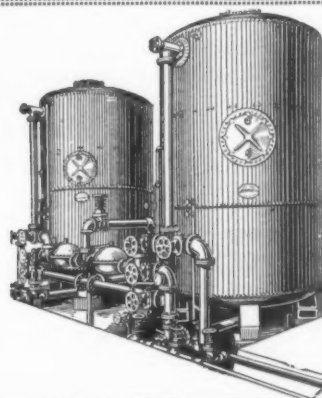
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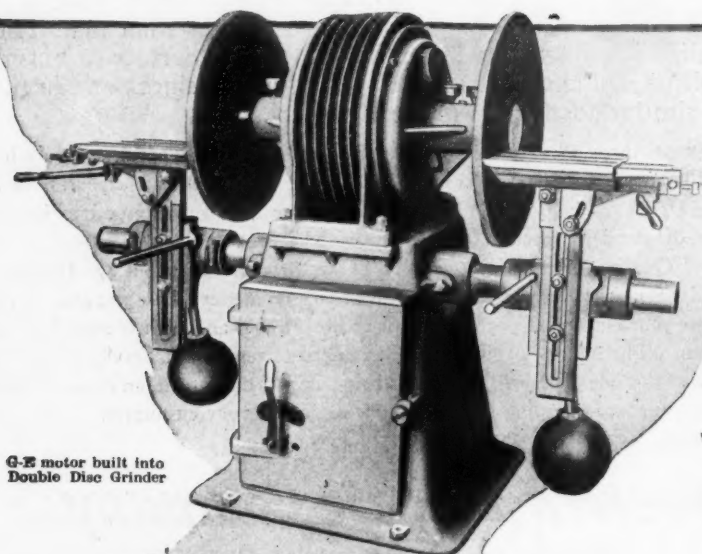
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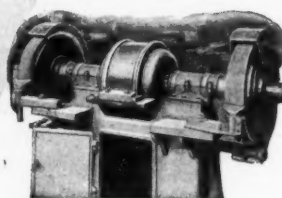
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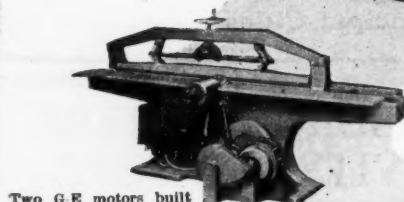
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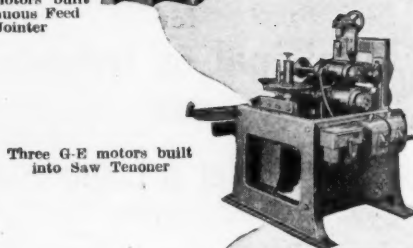
G-E motor built into
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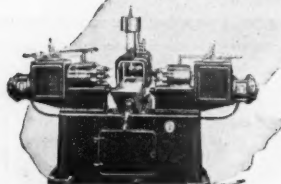
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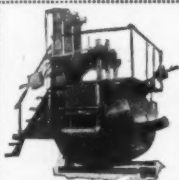


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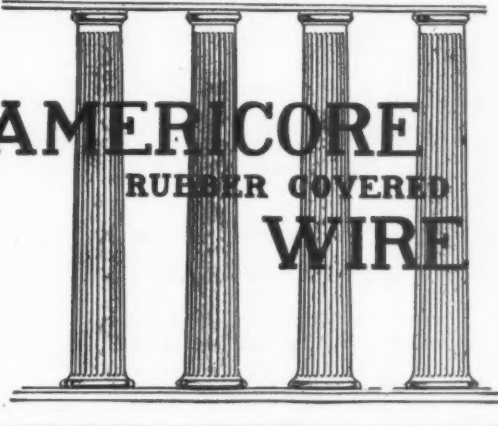
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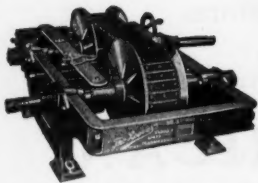
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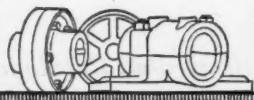
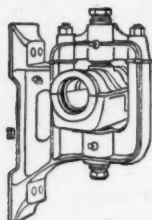
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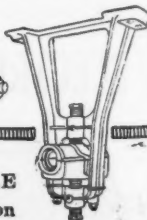
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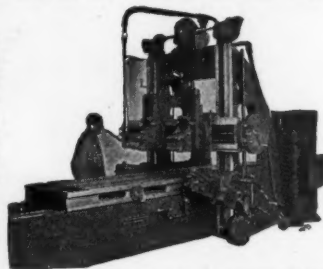
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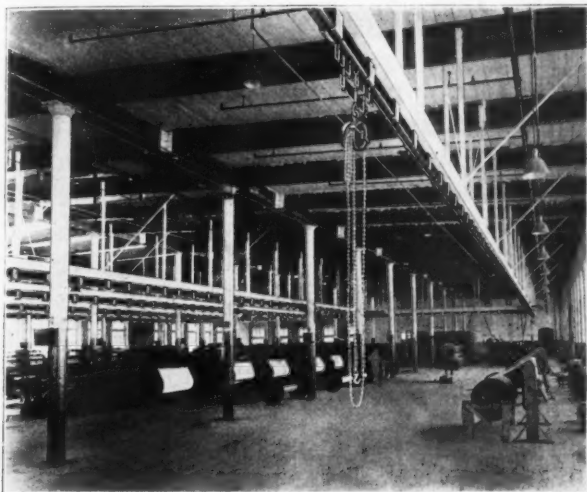
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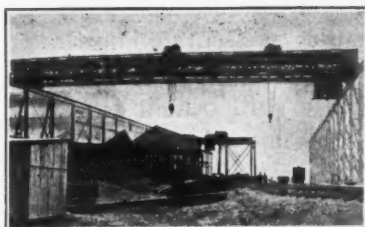
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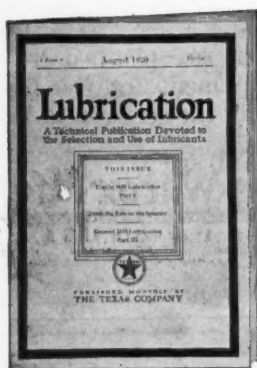
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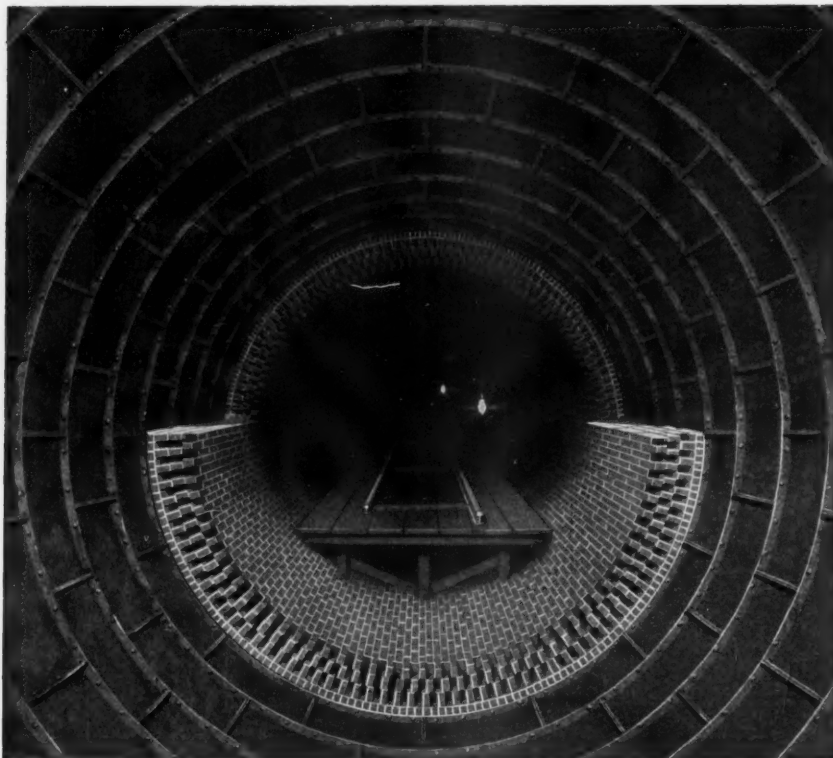
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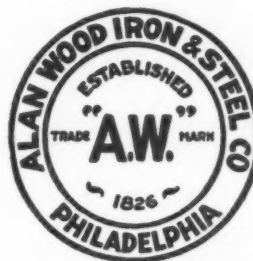
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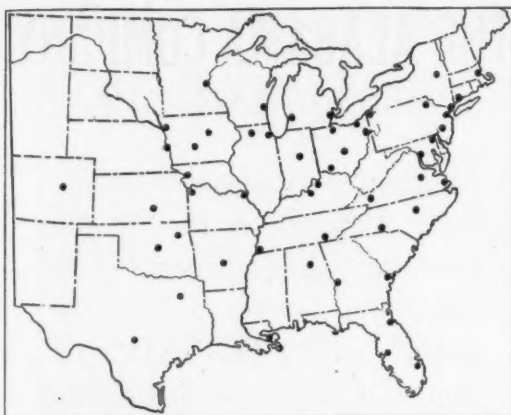
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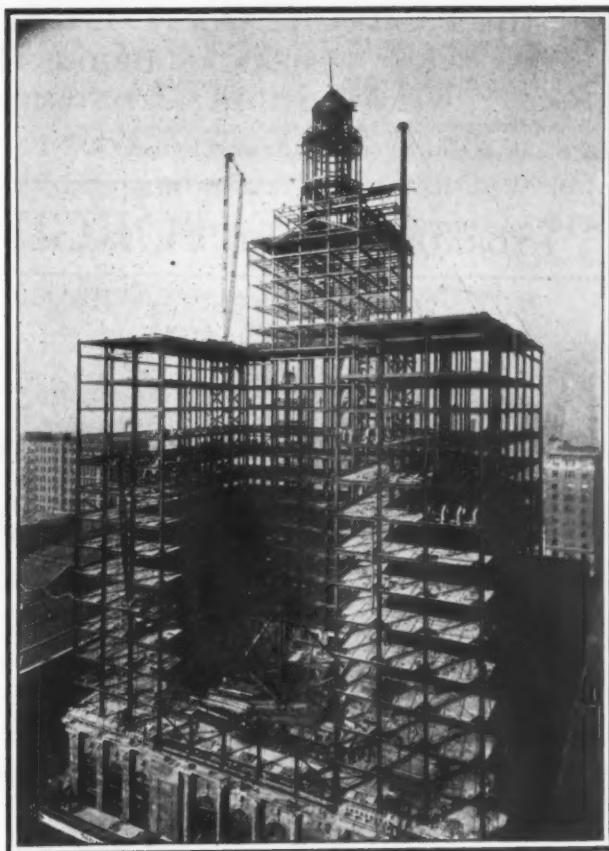
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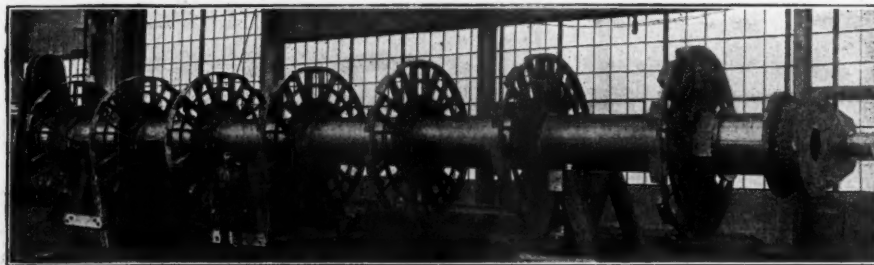
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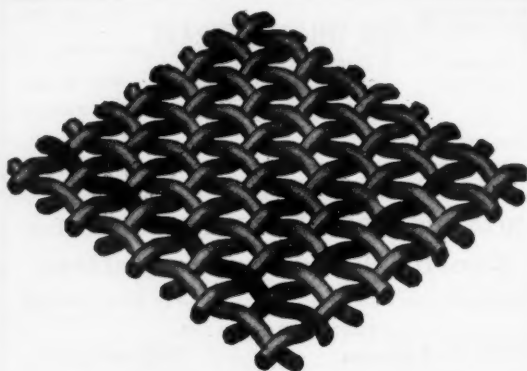
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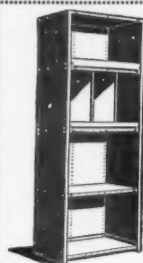
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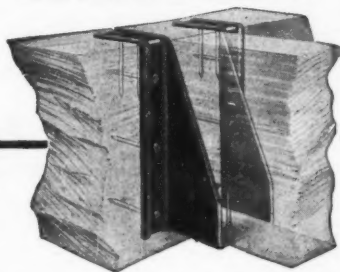
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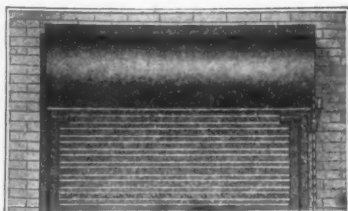
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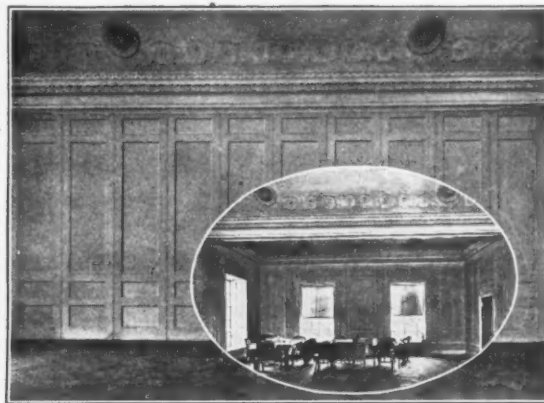
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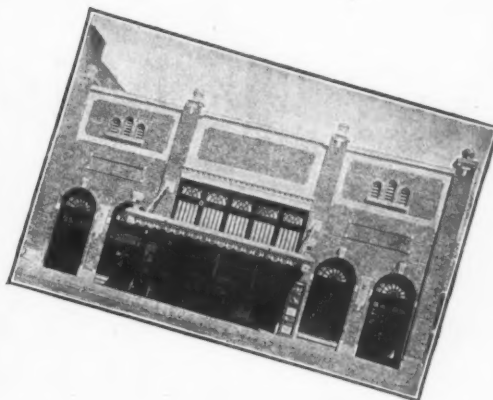
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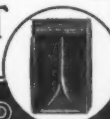
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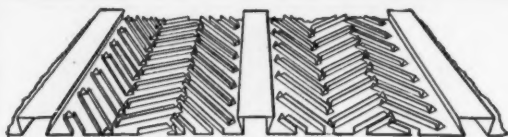
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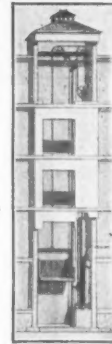
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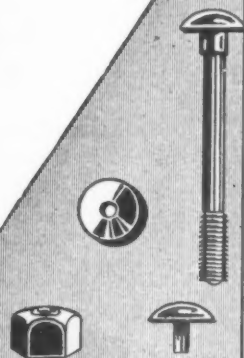
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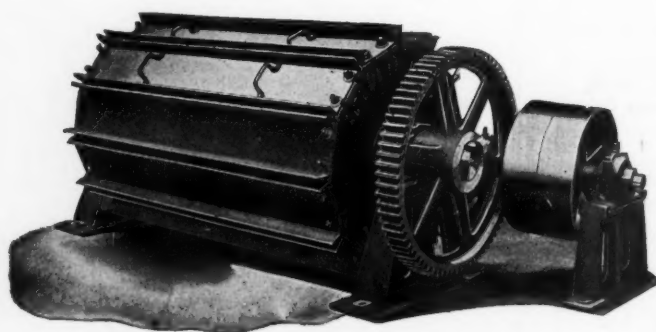
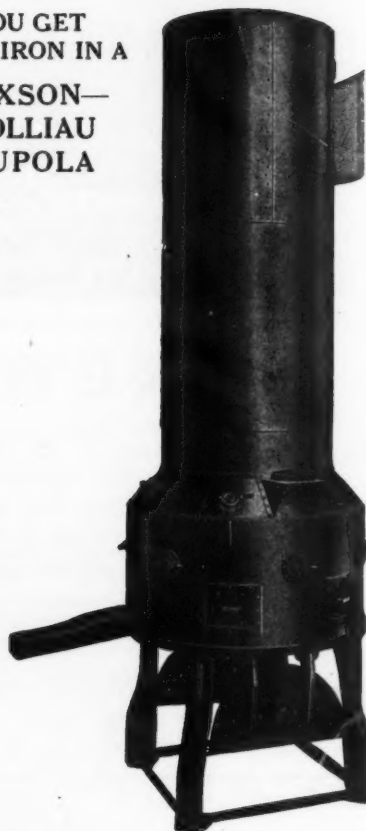
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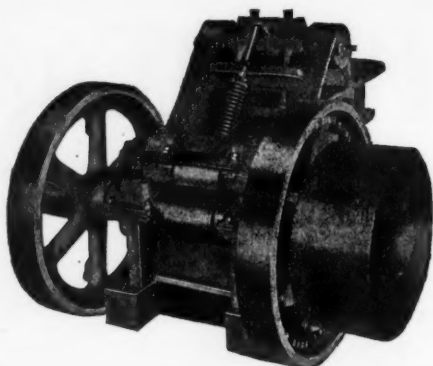
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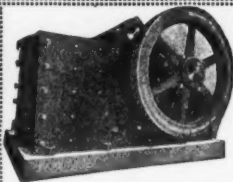
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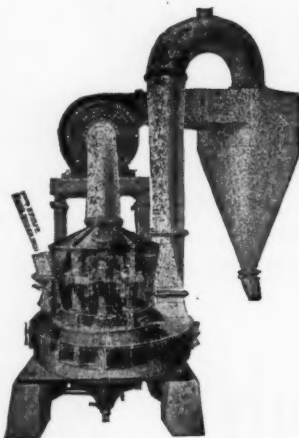
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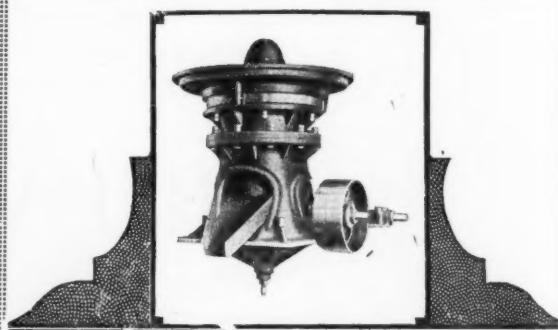
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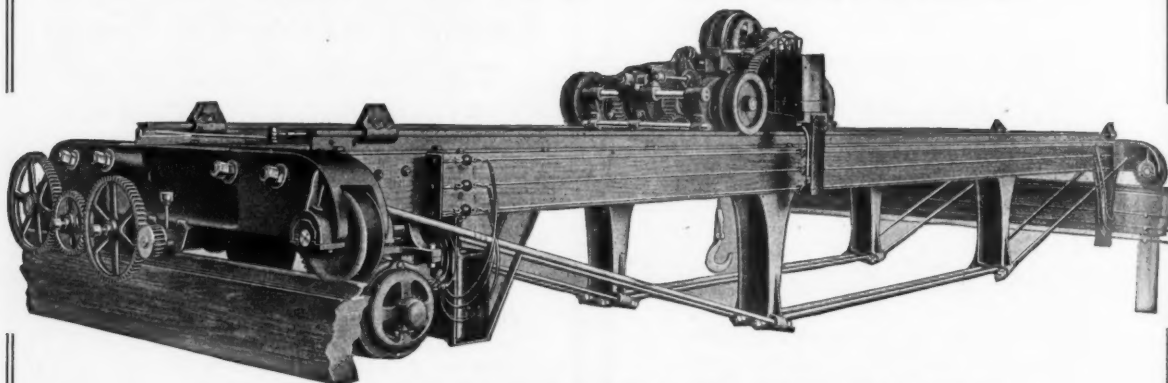
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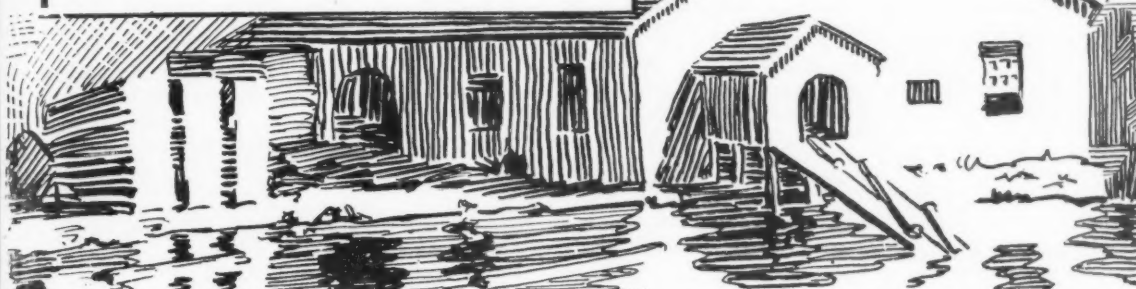


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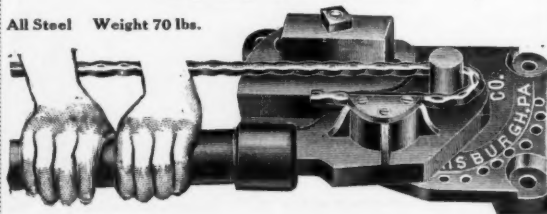
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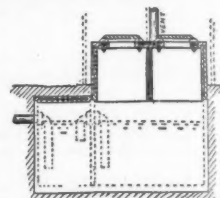


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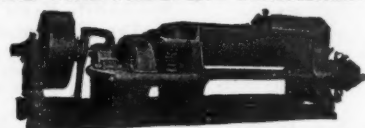
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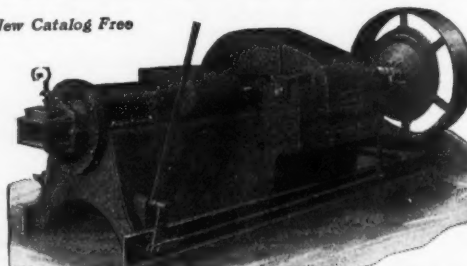
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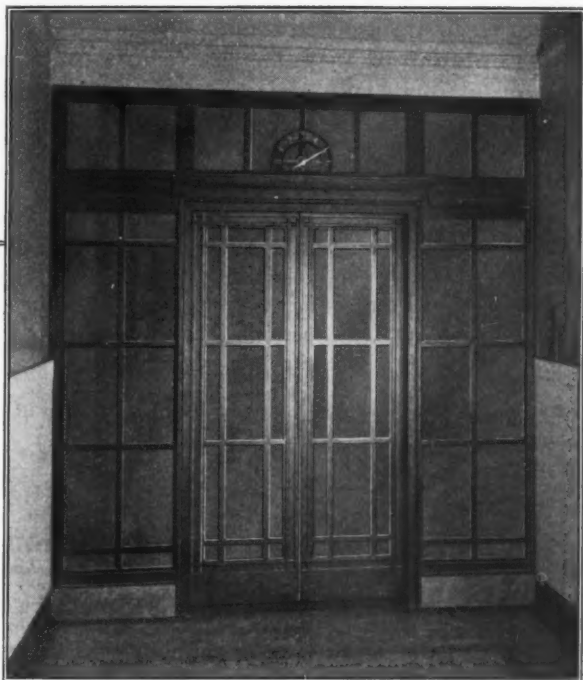
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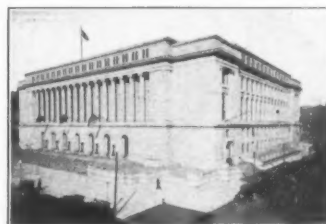
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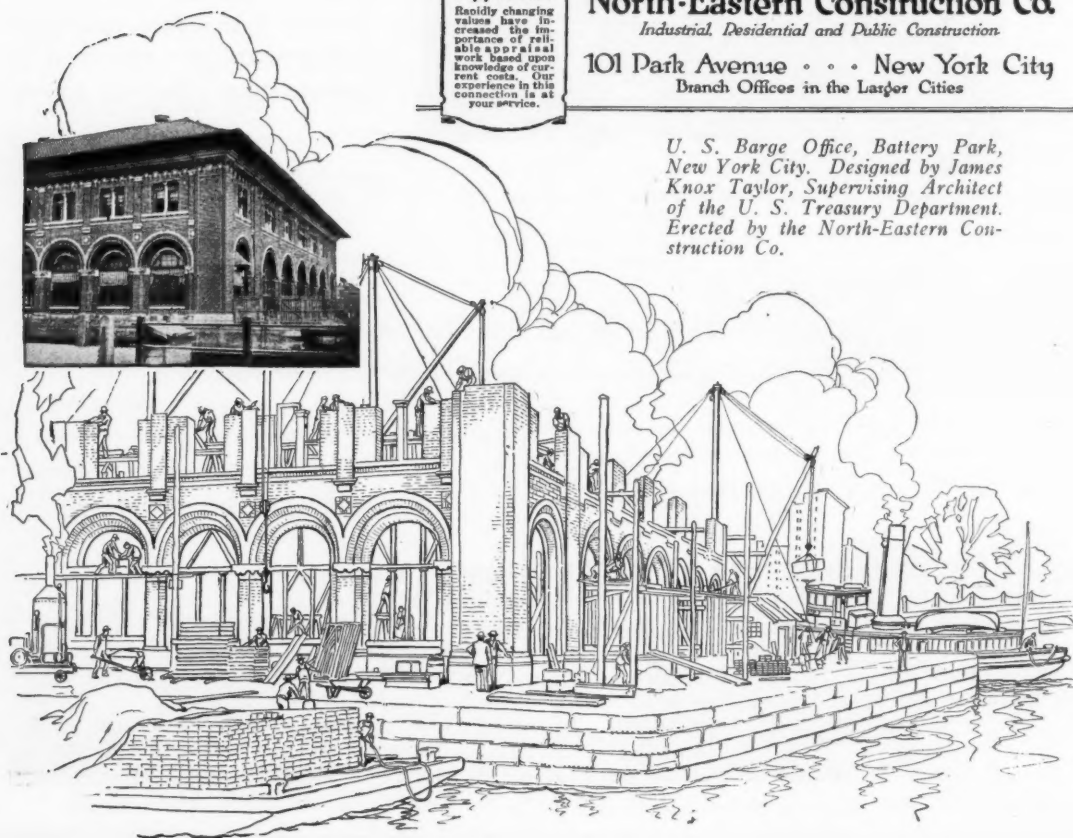
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Manufacturers Record

Exponent of America

AUGUST 11, 1921.

Volume LXXX

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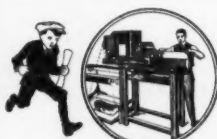
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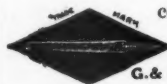
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WEEKLY.

BALTIMORE, AUGUST 11, 1921.

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In order to avoid delays all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

WHAT LACK OF FINANCIAL JUDGMENT DID.

UNDER the heading "Cotton Trade Heartened" the Boston Transcript publishes a despatch from its Memphis correspondent in which it is said "The most auspicious American development affecting cotton is the attitude of the management of the Federal Reserve Board toward loans on cotton. It is felt that this support will prevent undue sacrificing of the staple, in order to meet pressing obligations. It also is expected that announcement of the approval of this plan for loaning one hundred million or more for cotton interests will prevent forcing payment of outstanding loans based on cotton."

"Already, since this announcement was given wide publicity through the press, one bank in New York alone has renewed loans of more than \$500,000 to cotton factors in Memphis, and it has made very satisfactory terms as to maturity and rates of interest."

This might all have been written twelve months or more ago if there had at that time been the "auspicious development" of a sensible attitude on the part of the management of the Federal Reserve Board toward loans on cotton, on grain and on cattle. It was the lack of a sensible attitude toward business which caused the wreck of the last eighteen months.

IT WAS A STUPENDOUS SUM.

Cedar Rapids, Iowa, July 19, 1921

Editor Manufacturers Record:

Please answer the following in your publication:

"Did the loss sustained by the farmers, labor and all kinds of producers—by the contraction of credit and currency by the Federal Reserve Board amount to five times the cost of the war to the United States?"

THOMAS JEFF MOONEY.

No, the loss was bad enough, probably largely exceeding the total cost of the war to the United States, but by no means five times as great.

HENRY FORD'S OFFER FOR MUSCLE SHOALS MEANS A NEW EPOCH IN SOUTH.

HENRY FORD'S offer to the Government for the Muscle Shoals enterprise, if it be accepted, will mark probably the most important epoch in Southern industrial history. We believe it would mean far more for the South than even the entrance of the Steel Corporation into this section by the purchase in 1907 of the Tennessee Coal Iron & Railroad Co.

The possibilities involved in the Muscle Shoals enterprise are so far-reaching that it is difficult to exaggerate them. In the first place, there is a potential hydro-electric power far greater than any other development in the country outside of Niagara, and practically equal to the present development at Niagara, or over 600,000 H. P. The development of this vast power would also mean the opening up of the Tennessee River for navigation over a long stretch of territory, which in itself would annually be worth to the country far more than the aggregate cost of the whole water power plan upon which the Government has been working. The utilization of the enormous nitrate plant by Mr. Ford for the production of nitrates and fertilizers on the basis which he has proposed would bring about a very great reduction in the cost of fertilizers to the entire South. With this nitrate plant in operation and the proximity of the Tennessee phosphate rock fields, an entirely new era in the fertilizer industry could be inaugurated. Indeed, we believe that in this respect his influence upon the fertilizer, and thus upon the agricultural industry of the country, might fully match in value his influence upon the automobile industry by the hundreds of thousands of cars which he has turned out.

His offer proves the merit of the Muscle Shoals project. It sets at naught all of the vigorous propaganda which has been carried on for years to prevent the development of that power the opening of river transportation and the utilization of this power. That it will be vigorously fought by many vested interests may be accepted without question. Some will say that it is too great an undertaking to be financed and managed by one man. We grant that freely if the Government could be depended upon to do it. Some will say that no one concern should be granted by Congress so vast a power as would be put into Mr. Ford's hands. Some will say that the Government should not accept an offer of this kind, but should carry on the work itself, seeking in this way to prevent the acceptance of Mr. Ford's offer but the Government has failed to do the work and Ford gives life to the enterprise.

The proposition made by Mr. Ford will naturally in all probability bring forth many other offers. Some of these may be from concerns of sufficient magnitude to justify their serious consideration and perhaps they may be better than Ford's. But Ford's offer marks a new point in the whole Muscle Shoals situation, as it proves that one of the shrewdest business geniuses which this country has ever produced, sur-

passing in some respects Mr. Rockefeller himself, is willing to invest millions in the enterprise.

It has long been thought that Mr. Ford has been looking into the situation in the South with a view to building an automobile factory there. If he secures the Muscle Shoals enterprise we think it all together probable that in addition to his nitrate and fertilizer industry, he would establish at that point or somewhere in that section a vast plant for the production of Ford cars to meet the ever increasing demand from the South and the West. This is the logical situation, and we believe that Henry Ford can be counted upon to do the logical and profitable thing in business. A consummation of these plans by Mr. Ford would quicken the industrial activities and the agricultural conditions of the entire South, and be, as we have said the greatest single move ever made for Southern development.

The MANUFACTURERS RECORD rejoices that Mr. Ford has made this offer,, whether he or some other concern finally secures the property.

The MANUFACTURERS RECORD has not always by any manner of means been an admirer of Henry Ford. It lost faith in him for his pacifism in war and the wild scheme of his peace ship loaded mainly cranks on a cranky mission, but since Henry Ford licked some jackals of Wall street who thought they had him and his great enterprise in their power and saved his business from their domination or damnation we have a profounder admiration for his ability and financial acumen than ever before. His railroad operations have also shown him possessed of common sense in abolishing much useless red tape and cutting freight rates, to the horror of other officials, and so we are more than glad he has made his offer and turned what appeared to be a dead enterprise into a very lively scheme of immense possible value to the country.

There is now no danger that Muscle Shoals will be abandoned, though many influences will be at work to keep Ford from getting it. He at least must be given the credit for seeing that the Muscle Shoals enterprise is not to be made a corpse.

HOW LONG WILL FREE AMERICANS PERMIT SUCH THINGS.

FIVE important counties of Missouri are to be without railroad facilities because of the enforced abandonment of more than three hundred miles of line by the Missouri & North Arkansas Railroad, extending from Joplin, Mo., to Helena, Ark. The destruction of values of farm and of town property, and the inconvenience to farmers and to business men in securing transportation of any kind may be appreciated by the sudden elimination from existence of a three hundred mile railroad. And what is the reason for this situation? The official statement of the receiver of the road, who has found it necessary to discontinue operations, points to the labor situation for the destruction of this important railroad, with all of the disaster which will come upon the country through which it runs. In referring to the effort to reduce operating expenses by cutting down wages twenty per cent, in February last, the receiver said:

"We secured other men to furnish transportation service to the public, but have been interfered with to such an extent that our operating expenses have increased and our locomotives and other equipment damaged so that the operation of trains successfully is questionable. While the so-called strike has been in progress, bridges have been burned, employes have interfered with in their duties, water tanks have been temporarily rendered useless, obstructions have been placed upon the track, air hose connecting freight equipment has been cut and rendered useless, erroneous information has been given to shippers and the public in general relative to train operation of this railroad. Obstructions have been placed on guides of locomotives, rendering them unserviceable and thereby interrupting traffic. Bombs have

been placed in the engines, resulting in explosions. Emery and similar dusts have been used to damage equipment. Blue vitriol has been placed in the water, causing a very great amount of damage and, of course, all of these and other depredations have resulted in inferior operation and an extreme amount of damage in dollars and cents running into thousands of dollars.

A TRAGEDY TO THE PEOPLE.

"The present situation, which is a tragedy to the people dependent upon this railroad for service, is one which is beyond the control of the present management and the financial loss traceable directly to depredations and interference has been the greatest factor in the resulting necessity for the discontinuance of operation.

Commenting on this situation the "Little Rock Gazette" refers to the necessity of closing the road as being due to sabotage, and adds:

"These strikers, it was declared recently in an official statement from the chambers of United States District Judge Trieber here, had been guilty of placing nitroglycerin bombs in coal chutes, with draining water tanks, placing emery dust in cylinder heads of locomotives and chemicals in the boilers which caused them to rust."

Here is a case where railroad labor not only refused to accept lower wages, but committed crimes without end in the endeavor to wreck the road, even at the expense of the lives of other men. They placed nitro-glycerine bombs in coal chutes, and emery dust in the cylinder heads of locomotives, and committed other crimes for the express purpose of destroying property, regardless of the injury done to others, or the deaths which might follow their work.

Bearing on this illustration of the radicalism of labor unionism as it now is in this country, is a letter from Mr. J. H. Warren, of Alcolu, S. C., President of the Clarendon Lumber Company, in which he writes as follows:

"I have been reading the letters which you have been printing concerning the closed shop. The closed shop as I see it is one of the most serious problems confronting the American people and their liberty. Though we of the South have not been troubled to a great extent so far, the menace has steadily been drifting this way.

"I can never forget an experience which I had with a Labor Union at Canton, N. C. about fifteen years ago.

"I was working as a carpenter constructing the Champion Fiber Company's plant, when I was asked if I were a union man, and was told that I would have to join the union or get out. I asked for two weeks in which to decide and it was granted me, on the promise that I would join or leave.

"One day one of the men stopped me and told me to take my time, saying, 'We do not allow any speed on this job.' I told him it was my business if I cared to work fast, and certainly not his. In a few minutes a dozen men crowded around me and gave me orders to go slow, or there would be something coming to me, which I would get in short order. I told them "to Hell with your union, if that is your principle".

"I went to the time-keeper, and gave up my job.

"Go after them. You are on the right track. Keep it hot."

Another letter, which deals with the same question of Labor Unionism is from an employee in the Government Printing Office at Washington, who says that the shop is so completely unionized that it is practically impossible for a man to work there except he take out a union card, and he adds: "I know this sounds incredible, and is a condition unthinkable to exist in a department of the government. * * * I do not want to lose my job unless necessary, but I am willing to sacrifice much if in so doing I can make conditions better for those who come after me."

This employee of the government Printing Shop was writing to the MANUFACTURERS RECORD, making a plea in behalf of the open shop for Government work, in order that men may be free of unionism. Life is made unbearable, so we are informed, until employes take out a union card, and it is against this our correspondent is so vigorously and justly opposed.

Is it not time for free men in this country to get from under the domination of such a system of union labor as now exists?

A Leading Eastern National Banker Vigorously Assails, as Having Been Destructive of All Prosperity, the Unwise Restriction of Credit by the Federal Reserve Board and Banks—How “Pawn-broking Banking Methods” and Unwise Agitation Forced the Business Chaos of the Last Eighteen Months.

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Trenton, N. J., July 28, 1921.

Editor Manufacturers Record:

In reply to your communication, in which you quote a remark of mine, to the effect that “Much of the business depression is due to destructive liquidation forced by the controlling banking element”, and asking me for a letter thereon, I beg leave to say:

Business is largely a matter of sentiment. People buy or sell largely under atmospheric influence. If public sentiment is pessimistic, people become timid and are inclined to sell at a sacrifice. If the sentiment is optimistic and prices are rising, then the purchaser must bid for his goods, as the owner is inclined to be independent. Anything, therefore, that depresses public sentiment causes a sale of commodities on an unwilling and falling market and disturbs industrial prosperity.

Just as it is confidence that restrains the holders of paper currency from demanding gold, so it is confidence that restrains the merchant and the manufacturer from dumping their surplus on the market. If everybody demanded gold for outstanding paper currency a crash would ensue, because there is not sufficient gold to meet the demand. So in normal times there is always a surplus of commodities on hand and if everyone became frightened and tried to dispose of this surplus a crisis would ensue. It is on the basis of confidence, therefore, that business operations remain normal and prosperity prevails. This law is as certain as the law of gravitation.

When the Federal Reserve Board announced its policy of curtailed credit and of deflation, confidence was impaired and the natural inclination was to sell. Where everybody was selling, naturally nobody was buying, and as a consequence prices declined in six months as rapidly as they did in six years after the Civil War.

The Comptroller of the Currency, in a letter under date of December 28, 1920, to the Governor of the Federal Reserve Board, estimated the shrinkage in values somewhere between twelve and eighteen billions of dollars, or as he puts it, “property values in this country which have apparently melted away in the last twelve months (prior to December 28, 1920), represent a sum far greater than the total gold supply of the world at this time.”

This caused a tremendous cancellation of orders, and the protesting of foreign bills of exchange against shipments, while the latter were deteriorating in foreign harbors. The demoralization which grew out of this hasty, forced liquidation, not only checked the wheels of industry but it piled up frozen credits in banks and caused a tremendous loss to these institutions. Thus the movement at its very

inception defeated its object. It didn't liquidate at all; it simply froze.

It did more. It stopped business employment and wages. The American Woolen Company, in a nation-wide full page advertisement, stated that when the banking elements, through the Federal Reserve Board, gave notice of curtailment of credit and deflation, cancellation of orders poured in, their mills were necessarily stopped and men thrown out of employment.

An instance under my personal observation: The proprietor of a woolen mill that had operated continuously since its inception, mostly day and night shifts, as soon as he read the announcement, came to my desk and said: “This is extremely unfortunate and will result in business paralysis.” In a few days he had a million dollars worth of orders cancelled on him and his mill stopped operating for the first time in its history. These are only illustrations of the natural result that follows from banking interests interfering in functions outside of their proper jurisdiction.

The banker has a right to say to the applicant: “You may have no more credit.” He has no right to say to him, out loud, so the whole country can hear and be frightened: “You have got to sell your goods.” That means universal selling on a market without buyers.

More than that, the fundamental objection to this banking deflation, was the fact that it did not deflate all along the line. This was the unfairness of the proposition and the cause of industrial depression. It was utterly unfair to say to the producer, the farmer and the manufacturer or the merchant that they should deflate their product, unless they were guaranteed a deflation all along the line. It is unfair to say to the farmer that he shall take a greatly reduced price for his wheat unless you insure him reduced wages for his farm hands and reduced cost for his seed, fertilizers and the farm equipment. It is unfair to the manufacturer to compel him to deflate the price of his goods unless you guarantee him a deflated labor cost and a deflated raw material cost. This forced liquidation, therefore—the liquidation was forced through a reduction of credit—put the producers and the merchants of the country in the same position that the railroads and public utilities were in during the war. The Government forced up the wage costs and expenses of the latter without an adequate increase in the rate of service. The railroads and public utilities consequently suffered from increased operating costs, over which they had no control, without a corresponding increase of service charge.

The commodity liquidation policy of the banks compelled the producer and the owner to accept a less price for their commodities while their operating costs remained practically the same, or at least did not decline correspondingly with the shrinkage in value due to liquidation. Thus the cost of production remained higher than the liquidating or selling price, and industry necessarily stopped.

Liquidation is an ugly word. It savors of receiverships and bankruptcies and never spells prosperity. As a policy, therefore, the right of the banks to force liquidation cannot

be defended. It may have a right to extend or refuse to extend credit; there their functions cease. But even if it is contended that the banks have this right, the method of enforcing it was most unhappy. It was founded upon the theory that the way to restrict credit is to raise interest or credit rates.

This policy taxes the whole country unnecessarily in order to compel the few whose credit might be over-extended to retrench. It levies tribute on a whole nation in order to limit the few. To use a homely illustration, the principle is precisely this: If a percentage or indeed if all of the people of the country were over-eating, the way to stop over-eating according to this bank theory of raising interest rates to restrict credit, would be to increase the price of food so that people could not buy, instead of limiting the amount of food to a hygienic basis. Could any principle be more absurd or more vicious? And yet that is practically the banking policy that prevails today in regard to the restriction of credit. There is not the slightest excuse for raising interest rates in order to restrict credit, not the slightest justification.

The way to restrict credit is to refuse to extend it, instead of charging eight or ten or twenty per cent. The latter burdens the country with an unnecessarily high credit cost, always a handicap on business and enterprise. Credit can be restricted by the banks with the rediscount rates at four per cent. just as readily as it can with the rediscount rates at eight per cent. or higher, and if the present banking fraternity can't restrict credit by refusing to grant it, their Macedonian cry to high interest rates to come to their rescue is a confession of incompetency.

Some day the country will wake up to this pawnbrokers' practice and demand reform. If the recent action of the Federal Reserve Board in reducing rediscount rates had been taken long ago, business would have felt the invigorating influence before the present time, and there is room for a still further reduction in the rediscount rate.

Very sincerely yours,

E. C. STOKES.

SECRETARY HOOVER ON SAVINGS LOANS FOR BUILDING DWELLINGS.

IN reply to a letter called forth by his Chicago speech on the necessity of savings deposits being used to aid in extending the building operations of the country, Secretary Herbert Hoover in a letter to the MANUFACTURERS RECORD writes:

"There is no question about the effect of the tax-exempt security. You will see that the problem I raised about savings banks was not the normal savings banks but institutions which are carrying actual savings deposits and not applying some portion of this to building. I have the impression that normal savings banks carrying from 40% to 50% of their deposits in mortgages are doing all that can be expected of them."

The statement of Mr. Hoover that he thinks that the regular savings banks are probably doing all in the way of mortgage loans that can be expected of them, is very interesting, because he has not been understood on that point and his views have been sharply criticized by savings bank men who insisted that they were carrying as large mortgage loans as were justified.

Mr. Hoover's letter is in reply to one from the editor of the MANUFACTURERS RECORD in the course of which, commending his urgent suggestion for enlarged building operations, it was said:

"This country must find a way to increase the building

of dwellings, or else we shall have increasing congestion of population which is productive of all the evils that can be imagined, morally, physically and financially.

"There is one point, however, which is sometimes overlooked by those who are discussing this subject, but which I know you of course fully appreciate. While savings banks and similar institutions are carrying in the aggregate enormous amounts of deposits, these deposits are not in actual cash except to a limited extent. They are already largely invested in securities or mortgages. These securities cannot be disposed of except at a very great sacrifice, for probably a very large majority of them would not today bring anything like the original cost.

"There is another feature in connection with this which deserves careful study. Some months ago I saw that the Marshall Field Estate of Chicago was disposing of all of its mortgages and reinvesting in tax-exempt bonds, because on these bonds they could secure a net income of 5% or more, whereas the heavy income taxation upon the estate left a margin of about 1½% of all income for mortgages. How exact these figures are I do not know, but the idea is correct.

"Tax-exempt bonds are putting a tremendous burden on every kind of industry and are a powerful influence to lessen the investment in buildings and in business operations. The excess income taxation system is a weight almost beyond the power of the country to carry. It enchains and enslaves business activities, and just as is reported in regard to the Marshall Field Estate it is driving money from building operations and kindred work into tax-exempt bonds, especially for large estates, and thus throwing the heavier burden of taxation upon men less able to bear it, viz.: the man actively engaged in business and whose income depends not upon accumulated wealth, but upon what he can make from day to day.

"There is another feature of the situation in regard to mortgage loans to which I trust I may ask your attention, and that is the very high cost of money to borrowers. It is very common in these days for borrowers on mortgages to have to pay a bonus of 5%. They may perchance here and there secure the money on the basis of 6% interest, but a bonus of 5% added thereto makes the cost of money almost prohibitive."

With the statement of the MANUFACTURERS RECORD that the tax-exempt securities of the country are seriously militating against the expansion of industrial operations and the building of dwellings, Mr. Hoover is in hearty sympathy.

SHOULD BE REMOVED BY PRESIDENT HARDING.

F. C. GILMORE

Architect

Contractor & Builder

Tallahassee, Fla., July 22, 1921

Editor Manufacturers Record:

As long as I have the price I expect to be a subscriber to your valuable publication. While I call myself a Democrat in politics, like you, my country comes first. You are certainly doing a grand work for our country. We want no unions, I. W. W.'s and Reds to run our affairs. Let the open shop prevail.

Please tell us through your paper how we can get rid of Harding, the Reserve Bank Governor.

F. C. GILMORE.

There is probably no other way than by his removal by President Harding, but the country would be safer if every member of the Board who was jointly responsible for the Board's acts should also be removed.

Federal Reserve Board Forced to Reverse Itself, Hurriedly and Drastically, All Along the Line—Significant Developments at Congressional Hearing at Washington.

A DISTINGUISHED Senator, whose political affiliations should make him friendly to former Comptroller of the Currency John Skelton Williams, is reported to have remarked that he was extremely sorry Mr. Williams had attacked the policies of the Federal Reserve Board because the Federal Reserve Board would most assuredly "gut him."

It had been arranged that Mr. Williams should testify before the joint committee of the two Houses, now investigating agricultural conditions, on Tuesday, July 26, and Mr. Williams was in Washington prepared to go on the stand. He was informed that a postponement until the following Tuesday had been decided on. During the intervening week, there were some spectacular events, filled with meaning. The White House, for instance, gave out a statement intended to show the accomplishments of the Administration to date. In that statement emphasis was laid, strongly laid, on the fact that a change in the policy of the Federal Reserve Board had been brought about, that the rediscount rate had been FORCED DOWN, and it was intimated that it would be forced still further down. Also, there was presented to Congress the President's plan for an extension of agricultural credits, to be achieved by utilization of the facilities of the War Finance Corporation. A week's delay meant that the Federal Reserve Board could come into court, say, with cleaner hands. Likewise, it would not be the disposition of the investigating committee, we may assume, to press the Board too hard, provided that before the hearing it held, let us say, definite promises from the Board that it was already quietly correcting some major abuses and could show, forsooth, that it had ordered a return in the Atlanta District of the usurious graduated charges made last winter; that it had abandoned the graduated rates entirely; that it was not now coercing State banks; that it had given orders for liberality in financing this season's crops; that it would no longer compel indiscriminate liquidation, etc., etc. Instantly, we may say, following news that there would be a Congressional investigation, the Board drew over its lion's skin the mantle of a lamb. It would not be able to answer Mr. Williams on the date originally set for the hearing, it averred, but it could a week later.

This significant fact stands out: Mr. Williams, reinforced by public opinion from all over the United States, had scored a tremendous victory before he even took the witness stand. His Augusta speech had forced the issue. Rather than meet it, the Board hurriedly and drastically reversed itself all along the line. It (a) saw that rediscount rates were cut; (b) abandoned the system of graduated rates; (c) receded from drastic liquidation of farm products, urging the various reserve banks to be liberal hereafter and not to force on the market commodities for which only ruinous prices could be got. If it had not done these things the personnel of the Board would have dissolved and a new Board, responsive to common sense and public opinion, would have sat in its place.

The essential features of Mr. Williams' testimony have already appeared in the MANUFACTURERS RECORD. He went into them in greater detail in his testimony, which it required two days for him to give, and every citizen owes it to himself to get a copy of the hearings when they are printed and see the record for himself. The attempt to "gut" Mr. Williams proved to be a dismal failure. It was sought to show that the Federal Reserve Board had but a meagre measure of control over the regional reserve banks, and that

the regional reserve banks themselves could not undertake to define the character of individual loans, but Mr. Williams put the protagonists of this view to instant flight by simply quoting from the recent circular of the Richmond Reserve Bank, which very pointedly instructed the banks as to what kind of cotton paper they should handle and what kind they should not handle—a series of instructions which the Richmond Reserve Bank has since repudiated, saying that it had been misunderstood, which would indicate, as one Congressman said, that perhaps it would be wise to assign some one of the Reserve Board's literary experts to service at Richmond in the hope that he could employ the English language in an understandable way. The inference throughout was that the Richmond bank surpassed all others in what might be called narrowness of view, heartlessness of pressure, stubbornness of character and sheer misconception of the purpose and meaning of the Federal Reserve System. It was the Richmond Reserve Bank, to illustrate, which tried to crawl from under its own official pronouncements when they were reprinted last fall in the MANUFACTURERS RECORD. Mere awkwardness of expression would hardly be a sufficient excuse for the repeated alleged misunderstandings of what the instructions of that particular bank do mean.

It was brought out by Mr. Williams that during the period of greatest credit stringency even a speculator could get money if he was willing to pay at the rate of 200 per cent. the year for it. This brought up what is likely to prove to be the most important practical result from the whole inquiry. "Is it proper," it was asked, "for the Government to advance money to banks as distributing agents at, say, 6 per cent. interest and then have these banks pass the funds on to ultimate consumer—the borrower—at 10 per cent, 20 per cent, and 30 per cent or what the traffic will bear?" Mr. Williams answered that, in his opinion, on money borrowed from the Federal Reserve System banks should be required not to charge their customers more than 2 per cent. or 3 per cent. additional for that same money. This thought very obviously tremendously impressed the committee, and it cannot be doubted that legislation with that end in view will be asked of Congress.

Unfortunately Mr. Williams was compelled to deal historically with the situation and to resort to detailed figures to illustrate his points. He lacked the assistance of a skilled and informed attorney who could bring out the most salient points, whereas Governor Harding, who sat throughout the Williams testimony, was able at all times to write on a scratch pad questions to be asked the witness, passing them to a member of the committee, Representative Ogden Mills, who submitted them to the witness. Mr. Mills was fortified also, apparently, with full inside information from the Board, including its minutes, to which Mr. Williams, even when a member of the Board, found access so difficult. But not in a single case does it appear that Mr. Williams was trapped. He knew whereof he spoke and he spoke fearlessly. The effort to "gut" him was conspicuously futile.

We regret that there was not skilled questioning of Mr. Williams to develop truthfully the purposes of the Board—its policy as it understood it—for that is the crux of the situation and not the mass of detail and the cubic charts which the Governor of the Board is so fond of displaying on all occasions. It is quite possible, for instance, that drastic deflation of credit should for a period lead to an apparent expansion of credit. Indeed, the policy of the Board proved to be a failure from the beginning for the very reason that it

so completely knocked the props from under values of all kinds that it almost instantly froze loans. This was particularly true of foreign credits. A little grower in Alabama might be pressed to sell all he had and pay what he could, but the billions abroad were not "liquidated." We find Governor Seay of the Richmond bank, for instance, solemnly undertaking to prove apparently that South and North Carolina have had all the credit they ought to have because there is now due in Europe to American exporters and manufacturers \$3,000,000,000 and \$2,000,000,000 more to American investors. We have not the statistics on hand, but our memory is that the outside world owed England at least \$20,000,000,000 when the war broke out, but England was still able to finance her home industries. Because credits were frozen hard at the seaboard was hardly a reason why those frozen inland should be melted with dynamite. Mr. Williams quoted figures to show that Governor Harding was something more than a billion wrong in his estimates of credit advanced to agriculture, but the fact is that even if Governor Harding's figures were correct they would prove nothing except that he had liquidated all the liquidity out of the banks and had brought about exactly the situation which avowedly he had sought to prevent. The answer to whether there has been restriction or not is the enormous contraction of the circulating medium. Last January, the Board was boasting that it had called in something like \$200,000,000 of Federal Reserve notes in so many days. If that is expansion then words have lost their meaning and facts do not exist.

It had been said that Germanism was a state of mind, a state of mind that must be extirpated from the face of the earth. It was the state of mind dominant in the Federal Reserve Board that made maladministration absolutely certain. How useless is it for Governor Harding or anybody else to aver that the Board had nothing to do with prices, did not seek to drive prices down, was the victim of trade depression and not the cause of it! The testimony is eloquent.

"There is a prevailing impression that the break in general prices in 1920 was due to the restriction of credit, and that the Reserve Board was responsible for the restriction," said Representative Mills.

"There is nothing in it," said Governor Harding, "Our efforts in 1920 were devoted to preventing a collapse of the banking system."

This is a very clear and definite statement that restriction by the Board had nothing to do with bringing about a market debacle.

But immediately thereafter Senator Lenroot asked: "Suppose the Board had restricted earlier, would not the rise in prices have lessened?"

"That's probable," replied Governor Harding. "I'll be frank with you. Had interest rates been put up earlier, the runaway movement of prices and speculation might have been checked and it might have been better."

Which time was Governor Harding speaking *frankly*? The two statements do not dovetail, but the elements of fact are all in the second one.

It is but fair to say that the psychological drive on prices, the use of poison gas to break the markets, was not wholly the work of Governor Harding, who was denying deflation when it was at its pinnacle. It was the joint work of former Secretary of the Treasury Houston, who was opposed to the operation of the War Trade Board since it tended to keep the markets up by helping the exportation of farm products.

We think it is established that at the very time the Government was urging producers to plant to the full limit of their resources the Federal Reserve Board knew, beyond peradventure of a doubt, that the crops made would be brought into a bankrupt market. Of what use is it for the Government to maintain a great Agricultural Department, devoted to the information of farmers, if a coordinate department or bureau of the Government sits up nights devising means to

make the advice of the other Department worthless and untrue?

We do not believe that there is a really capable financier in the whole world who endorses the plan of graduated rates. But consider that it was merely the application in extreme form of the Board's other dictum that the only way to control speculation was to advance the interest rates. It is a matter of record that when the amendment to the Federal Reserve Act permitting graduated rates was proposed, it was urged on members of Congress from agricultural districts that the purpose of it was to keep country money from going to the cities, that the object was to help the farmers. Representative Stevenson of South Carolina ridiculed the objections of Senator Smith of the same State to the amendment, declaring that he did not know what he was talking about and that the graduated rates would prove of real and lasting benefit to the farmers. But, lo and behold, after the law was enacted, the graduated rates were never applied, we believe, in a single metropolitan district but were employed almost exclusively to penalization of the agricultural districts. And yet Governor Harding says that there was no discrimination against agriculture?

It is not denied that the Federal Reserve Board determined, as a set policy, to force Liberty Bonds out of the banks, charging those that remained against what is called the borrowing bank's basic line, thus reducing by millions the borrowing capacity of the individual banks. It may be that all men are liars who dare to criticize the Board, but in the press reports we find an extract from an address delivered August 4 by Mr. E. C. McDougal, President of the State Bankers' Division of the American Bankers' Association, to this effect: "Through the Federal Reserve Banks it (the Government) practically forced the bankers of this country to force their customers to buy Liberty Bonds, and to loan them at fictitiously low rates, money to buy the bonds. But when the Government had no more bonds to sell, its pressure was withdrawn, the Federal Reserve Banks raised the rates to the figures which should have been established at the beginning of the war, and the public were compelled either to carry the bonds at a yearly loss of interest or to sell them at a serious loss of principal. In the meantime, the Government has been buying back from time to time, at a heavy discount, bonds that it had forced the public to take at par, at the same time boasting of the saving. This comes very near to plain dishonesty."

Governor Harding's explanation is that a mistake was made in the original financing of the war. His Board has sought to correct that mistake by a brutal repudiation of the nation's commitments. Were the Government an individual a suit for recovery would lie. This restriction of loans on Liberty Bonds, this basterdization of the bonds themselves, is known to all men, and in itself it meant a restriction of credit reaching into the billions, but in the face of it Governor Harding declares that there has been no restriction of credit, but rather an expansion.

It is admitted that usurious rates were charged, because Mr. Williams proved the fact. Usury is a restriction of credit. The return of the usurious overcharges is a confession. Is not credit restricted when the cost of it is made prohibitive? The question answers itself.

It is admitted that banks, in addition to being held within their basic line, were compelled to produce collateral up to 150% and 200% and 250%. You do not restrict a man's credit when you compel him to use all of his securities for a loan that would be amply secured by half of them. When you lock a man's securities in a dark vault and keep them there, you restrict his credit even if the books do show that he has been lent a few dollars more than he formerly was accustomed to borrow.

It is proved, we think, that when confronted with the greatest volume of business this or any other nation ever

enjoyed, Governor Harding and his associates solemnly reached the conclusion that there was too much business—too much business for the credit facilities available—and the course of action pursued was not to bring these credit facilities up to the requirements of business, but to squeeze business until it fit the credit structure; this in spite of the fact that the Federal Reserve Board System was predicted on the hypothesis that it would be as elastic as business itself.

It is admitted that the Board was unable mentally to visualize any method whereby to curb wild speculation other than drastic increase in the rediscount rates. It is reported that in the conference of bankers with the President of the United States Mr. J. P. Morgan, who may be presumed to know something about finance, stated that he could see no hope ahead if the financial authorities were unable to devise any curb except the employment of graduated rates. Heaven help the banker who has not brains or judgment enough to know whether loans he makes are for speculation or not. Usury, we agree, can kill speculation and all business, as has been proved, but use of it for that purpose is, we must emphasize, a vicious and an awful thing.

It is asserted by Governor Harding that had not the Board intervened we might have found ourselves in the position of Cuba, or on a fit basis. And yet it is written clear in the record that the gold reserve never once reached the basic line of 40% set by statute, although the same statute specifically provides that the reserve can legally be kept lower than that in period of stress. With a gold reserve four times greater ratio than that of England, it is absurd to say that the metallic basis of our currency was threatened. In a period of the gravest economic emergency the nation has ever known, the Board declined to avail itself of the lower reserve ratio permitted by statute, but insisted on and carried into effect a policy devised to increase and magnify the reserve ratio.

It was the bankruptcy of financial statesmanship to adopt usury as a cure for a so-called speculative mania. Only text-book financiers would have employed it and only obstinate men would have stuck to it, particularly after its failure had been overwhelmingly demonstrated.

Ten thousand men can come to court and show that no mercy was shown them in the enforcement of the liquidation program. Governor Harding says the individual banks were responsible, not the Board. But also into court, if not coerced, could come bankers by the hundreds to show that they in turn were forced by the Reserve Banks, and they would not have dared so act without the sanction of Washington. Why say that a bank was not forcing its customers to liquidate at any sacrifice if the bank itself was being charged at the rate of 87½% interest as a penalty for not forcing liquidation?

To listen to the testimony of Governor Harding one would suppose that he was the head of a spineless, powerless and spongy debating society, with which the regional banks did what they willed. The fact is, of course, that the regional reserve banks long ago learned that they were but clerks to carry into effect Washington policies, and the comparative ease with which the new Administration forced a lowering of rediscount rates is eloquent testimony of the true power exercised over banking in Washington.

On this subject, Mr. McDougal, whom we quoted above, is very precise—and he knows what he is talking about. He says:

Should the Government continue to interfere in our banking business, except for the enforcement of law and the protection of depositors, it inevitably will make the same record of inefficiency and failure as in designing airplanes, in building and operating ships and in operating railroads. Hampered by red tape, bankers will not be able to give the public good service. Strict supervision, criticism and cor-

rection should be maintained, but the Government should not pass the line that separates these proper functions from actual management. Credit without which this country never could have developed and outstripped all others, cannot thrive when shackled by politics and bureaucracy."

Bureaucracy! That is what the nation has had until it is a nervous wreck.

But, Mr. McDougal continues, "Should a business man be told that his bank will carry him through, providing he will follow the policy of gradual contraction and liquidation, and should he be stubborn and refuse, as unfortunately some do, then he would have no right to complain should the bank force liquidation, but even then the liquidation should be gradual." We do not know what Mr. McDougal thinks about the kind of liquidation the Federal Reserve Board has sanctioned and initiated, but we do know that it is just the sort of liquidation he describes as indefensible.

The statements of Mr. McDougal are not stronger than those made in this week's issue by former Governor Stokes of New Jersey, president of the Mechanics National Bank, Trenton. Governor Stokes is a public man of the highest standing, and a banker of wide experience. His denunciation of the deflation work of the Federal Reserve Board and of bankers under the lead of the Board, is one of the most striking presentations of the situation that has been made by any banker in the country. Fortunately, Governor Stokes not only has convictions based on knowledge of finance, but he has the courage of his convictions and is not afraid of the power of the Federal Reserve Board. Would to Heaven that the country had more bankers who had all of these qualities! In studying the statements made by Mr. Williams and the effort of Governor Harding to deny deflation of credit, we urge every reader to study carefully the letter of Governor Stokes.

Later on, when the printed testimony is available, we shall doubtless take up in greater detail many of the points developed by Mr. Williams in his statements. It is sufficient now to emphasize the fact that his bold defiance of the financial autocracy which has been built up in Washington has already had a wonderfully beneficial effect. Long after anything else he has done has been forgotten, it will be remembered of this man that he dared the Colossus and drove him at least to compromise.

The comment of one Congressman on the situation is very enlightening. "If you accuse the Board," he says, "of having brought about this great debacle, the members deny that they are in any way responsible. But if you congratulate the Board on having knocked the bottom out of the markets and on having raised the gold reserve ratio to a point that is in itself a national scandal, they one and all take off their hats, bow solemnly and say, 'We thank you. We did it.'"

Or, to paraphrase an eminent member of the Board. "We did not restrict credit, but if we had not restricted credit there would have been a collapse." No wonder Professor Einstein stayed so short a time in Washington. The answer would have been beyond his powers of comprehension.

USELESS AND FOOLISH DENIALS THAT FEDERAL RESERVE BOARD EVER SOUGHT TO DEFLATE CREDITS.

IN VIEW of the constant reiteration of the Federal Reserve Board that they have not made any effort to deflate credits, it may be of interest to reprint the following which appeared on the cover page of the Manufacturers Record of November 11, 1920.

THE CAUSE OF BUSINESS DEPRESSION

Governor George J. Seay of the Federal Reserve Bank of Richmond is sending to member banks in pamphlet form a copy of his letter of October 8 to the Manufacturers Record, in the course of which he said:

"The facts expressed in these figures are a complete repudiation of those charges that there has been 'credit curtail-

ment, or 'domination over' either Federal Reserve Banks or member banks 'which forced banks to curtail credit.'

That amazing statement should have been withdrawn by Governor Seay before this. It is incomprehensible to intelligent men that he should have issued it.

In circular-letter No. 94, issued on December 20, 1919, to all member banks, the Federal Reserve Bank of Richmond said:

"Our present task, therefore, is to proceed with the deflation of credits as rapidly and as systematically as possible."

On April 26 circular-letter No. 95 to member banks said:

"It is a recognized function of the Federal Reserve System to exercise control over the volume of credit and currency. * * *

"It is recognized to be unsafe to go further with commodity prices at such a dangerous height. * * *

"If all the banks in this district will earnestly and conscientiously endeavor to limit credits to necessary activities for production purposes, insist that the burden of carrying loans on Government securities shall be gradually assumed by subscribers, etc."

The circular-letter of June 21 said:

"Immediately upon the passage of the amendment we issued our Circular No. 95, in which we expressed the belief that if all banks in this district would earnestly and conscientiously endeavor to limit credits. * * *

"We have sent out information intended to enable all member banks, and particularly those borrowing rather heavily from us, to co-operate with us intelligently for the conservation of credit."

On August 24 the circular-letter said:

"We had been conducting a campaign for the conservation of credit for more than a year. * * *

"If we can all pull together, however, for a while longer and continue to exercise the greatest possible care in the granting of further credits, etc."

On September 23 the circular-letter to member banks said:

"It is in our opinion more important than ever that great conservation should be used in granting of credits, etc."

We regret that space forbids using these statements in full, but they will all be found in our issue of October 21.

The inevitable result has come. It was foreseen from the beginning by every intelligent man who cared to study the situation. Every plant that is forced to close, even temporarily; every laborer now looking for a job because of a shutdown; every decrease in wages; every dollar of the \$7,000,000,000 to \$8,000,000,000 wiped out in the value of farm products is a testimony to the unwise effort of the Federal Reserve Board to break down prices. And all of this because the Federal Reserve Board, with narrow vision and financial incompetence, struck at the credit situation and wrecked the country's prosperity.

In this connection it is not inappropriate to quote the statement made on September 27 in Bulletin No. 2, issued by the First Federal Foreign Banking Association of New York, which said:

"Under authority of the League of Nations a propaganda of international deflation has been launched." * * *

ELECTRIC RAILWAY DEVELOPMENT IN EUROPE.

IN a recent issue of the Electric Railway Journal there appeared an illustrated article on "Railway Electrification in Europe," which is full of interest and information. It was written by J. V. Dobson and F. E. Wynne, both of whom are connected in engineering capacities with the Westinghouse Electric & Manufacturing Company, and who are therefore fully qualified to record and discuss their observations abroad. While street railways as well as interurban railways are considered in the article, the several pictures accompanying it relate to interurban railways.

Among thirty-four transportation features abroad which attracted their attention several may be mentioned that the public will appreciate. These are the use of double decked street cars in large cities, the use of the bow trolley instead of a trolley with a wheel, the zone fare system, three car units for suburban service, artistic designs of railway buildings, light weight cars for both freight and passengers, open top freight cars for all kinds of freight, high speed freight trains, side door compartment type passenger cars, tickets retained by passengers until their journey's end, and strict

enforcement of laws against trespassing on tracks and other railway property.

In English cities the authors of the article noticed a general use of the double decked street cars, some of them with their upper decks enclosed. The advantages of two decks for both companies and passengers are quite apparent, but it appears that in anticipation of the use of double decked cars, the English builders of electric railways place their trolley wires considerably higher above the street level than is customary in this country. In Christiania, Norway, the travelers observed and commented on the bow trolleys on street cars. They say that the operation of this form of current collector "is excellent and this is noticeable wherever this form of collector is used for street car service in Europe."

Open top freight cars for all kinds of freight proved their utility during the war. Freight which might be damaged by the weather when loaded in such cars is protected by tarpaulins drawn over the top of the load and down over the sides of the cars. This practice greatly facilitates the loading and unloading of cars and was found to be a valuable factor in securing the rapid movement of freight during the war. Many of these cars are like the gondola type of car familiar in this country. The maximum capacity of a freight car in England is approximately 20 tons of 2240 pounds each. Cars of great capacity, such as our 100 ton and 120 ton coal cars are unknown there or on the Continent.

In England there is to be found much electrification of railways, especially on suburban lines around London and at least one of these roads is operated in connection with a steam railroad. France, Germany, Norway, Sweden, Switzerland and Italy all have their interurbans regularly operated and affording speedy services. It is noted that Switzerland is particularly interesting, because of the extent to which its railroads have been electrified. Notwithstanding the very heavy grades, it is remarked that on the Lotschberg Railway the regular speed up a grade which is 50 per cent. steeper than that on the Pennsylvania Railroad between Altoona and Gallitzin, Pa., is 35 miles per hour. Furthermore, on a 3½ per cent. grade of another road the up hill speed is 20 miles per hour.

Commenting upon the difficulties encountered by railroad builders in Switzerland it is stated that in some instances "the only way grades can be kept within reason in many places is by winding back and forth up the side of a mountain, constructing spiral loop tunnels within the mountains, and crossing back and forth between the sides of gorges. On the St. Gotthard line of the Swiss Federal Railways there are seven spiral tunnels between Erstfeld and Bellinzona, a distance of 68 miles."

While in Switzerland the authors noted that the second tube of the Simplon tunnel, which is 13 miles long, is approaching completion and when finished will give two tracks there under the Alps. All main lines in Switzerland are to be electrified.

It is especially worthy of remark that many of the electrified railways in Europe are operated by electric locomotives instead of by electric motors on the cars themselves. For instance, it is noted that the State Railways in Italy have in operation and on order a total of 222 locomotives assigned to their electrified sections of line. Yet there are many lines running big cars with motors on the axles. The State Railway in France (formerly Western Railway), is running a type of motor car that weighs 63 tons and still another of 72 tons.

Electrification is progressing in all European countries and within a very few years many more lines will be run by electric power. In some cases American built motors and control apparatus are already in use, competing in Europe with machinery built in one or another of the several countries there.

Official Statements That Exportation of Farm Products Was Discouraged in Order to Break Down Prices.

WE WROTE President Wilson in the early Fall of 1919 and forwarded to him a resolution passed by a convention of around three thousand people held at New Orleans, composed of leading farmers, merchants, bankers and business men throughout the entire cotton belt and asked him if there was any possibility of a deflation policy being put into effect, urging that definite information be given concerning exports. An examination of history brought to light the fact that there was always inflation during wars, due to under-production, to destruction of commodities, and due to the fact that the governments, themselves, took steps to inflate during wars for the purpose of enabling them to secure finances for the purpose of carrying on said wars. It was our understanding that the economists and financiers who were responsible for the adoption of the plans for the raising of finances through the sales of bonds were unanimously agreed that following the world war it would be absolutely necessary to pass through a long period of inflation as result of the world war and the vast amount of bonds floated for financing same.

"We requested this information as we fully realized the disastrous effect artificial deflation would have upon agriculture and commerce; that, as it was necessary for us to incur all of the expenses for the production of cotton before it could be marketed, a deflation policy or the closing of exports would spell the absolute certainty of imposing heavy losses upon the producers; and we had positively determined, regardless of the fact that we had been urged to produce fifteen million bales of American cotton, as there would be pressing demand for this cotton, to drastically reduce cotton production, unless we could be positively assured that there would be no deflation policy and that the means for exportation of our cotton to Europe would be furnished.

"A reply to his request convinced us that there was no danger of a deflation policy; that the War Finance Corporation had been created for the purpose of furnishing the means of exporting products to Europe and that same would function for one year after the ratification of Peace. However, please keep this in mind. In the latter part of March 1920, the following Spring, Secretary-Treasurer Houston wrote me in answer to the former letter I had sent to the President months before, stating that they were opposed to the exportation of American products as it would result in maintaining present high prices and such prices were subsidizing the American farmer. Immediately upon receipt of this letter, we made every effort possible to make a direct sale of cotton, realizing that as sixty-four per cent of the American cotton crop is exported, it was absolutely necessary to continue the active exportation of same for the protection of the agricultural producer and the various allied friendly interests. As a result of concentrated efforts and a large expenditure of funds we had practically completed all details for the sale of three hundred thousand bales of cotton at a basis of forty cents f. o. b. American ports for strict low middling. The matter of disposing of low grade cotton was of especial advantage to the American producer, as only the cream of the cotton crop had been purchased since 1914, Germany and Central Europe, the main countries consuming low grades, having been shut entirely out of the markets.

The sale of this cotton was conditioned upon the financing of same through the War Finance Corporation. At the last minute Secretary Houston, over our protest, removed the War Finance Corporation. Realizing the fearful losses that this would bring to the cotton producing industry and the wreck and ruin it would bring to agriculture and commerce nationwide, we solicited the co-operation of representatives from agriculture and commerce nation-wide. With the assistance

and co-operation of leading senators and congressmen, we appeared before Secretary Houston, and representatives of agriculture from practically every state in the Union and from many lines of commerce, joined in the request for re-instatement of the War Finance Corporation, pointing out the vital necessity of the actual functioning of said Board for the protection of various lines of agriculture and of commerce. We also unanimously joined in a request for the cessation of propaganda which was being issued through the Press from the Secretary's office concerning the necessity for the lowering of prices of agricultural products and stating that the Treasury Department would take no part in assisting in financing said products, as it would be a conspiracy and constraint of trade. It was pointed out that this propaganda was resulting in absolutely destroying confidence and would create, not a buyer's strike, but a buyer's panic, if continued in. All efforts to induce Secretary-Treasurer David Houston to re-instate the War Finance Corporation proved unavailing.

"We then appeared before the Federal Reserve Board and unanimously urged and pleaded for a lowering of the rediscount rate and more liberal extensions of credit and circulation. A request was made of the Federal Reserve Board that they join in the request to the Secretary-Treasurer to re-instate the War Finance Corporation, it being pointed out that the removal of same was having disastrous results and unless reinstated it would practically destroy markets and bring fearful losses to the agricultural producers, who had already incurred expenses for the production of their crops at the peak of high prices and under the assurance that there would be a pressing demand for increasing American production, and that the cotton growers were assured that there would be a pressing demand for at least fifteen million bales from the 1920 crop. Efforts to secure relief through the Federal Reserve Board in like manner failed.

"As result, today, we find that the agricultural producers are facing a loss in the price of American agricultural products as compared with last July of around eight billion dollars. There is no market for agricultural products except at one-third to one-half of the cost of production. Had the sale of the three hundred thousand bales of cotton made by the American Cotton Association, which sale was composed largely of low grade cotton, been permitted to go through it would have resulted in bringing, not only great benefits to the cotton producer, but to the business of the entire nation and conditions would have been far different today, not only as a direct result of the benefits received from the sale of this cotton, but the sale of this cotton through the War Finance Corporation would have so demonstrated the benefits to be secured as a result of the active operation of the War Finance Corporation, that the Secretary of the Treasury would not have had the nerve to remove the said corporation and American exports would have shown enormous increase."

The foregoing is an extract from a letter from Mr. J. S. Wannamaker, President of the American Cotton Association to the MANUFACTURERS RECORD. The statement which he makes that Secretary Houston was opposed to the exportation of American products because this would maintain high prices in this country, is not a new charge. It has been repeatedly made and is in direct harmony with the views constantly reiterated by Mr. Houston in decrying the prices then existing and insisting that there would be a break down.

It is likewise in harmony with the determined efforts of Mr. Houston to prevent the functioning of the War Finance Corporation, the revival of which was vetoed by President Wilson over the earnest protest of men who understood the situation and warned President Wilson that his veto

would further intensify the acute agricultural situation. Fortunately for the country, Congress by an overwhelming vote overruled President Wilson's veto against the earnest protestation of Secretary Houston, and put into operation the War Finance Corporation, the discontinuance of which by Secretary Houston without authority therefor was one of the monumental blunders of his work. But monumental blunders were so many in those days that it is difficult to name which one was the greatest.

Mr. Houston seemed determined to prevent the exportation of farm products in order to prevent the maintenance of profitable prices to the American farmers, and with his strong influence in the Federal Reserve Board helping with all the power at his command to break down prices, it is very easy to see how the chaos of the last eighteen months has been brought about. A blacker financial crime against the American people and civilization itself is not recorded in the history of this country.

In a letter dated September 27th, 1920, Secretary Houston wrote to Mr. Wannamaker:

"The activities of the War Finance Corporation in making loans to facilitate exports, but discontinued after full consideration of the matter and conference with the President."

In a letter dated March 4th, 1920, Secretary Houston wrote:

"I do not think it would be wise for the Government to subsidize our producers and to maintain or increase the high level of prices here by stimulating sales to European countries which find themselves unable or unwilling to make payment for their purchases."

The discontinuance of the War Finance Corporation, for which there was no legal authority, was, as shown by Secretary Houston, for the express purpose of stopping the co-operation of that corporation with the producers of this country for the shipment of their farm products to Europe, and which Mr. Houston suggested was a subsidizing of American farmers to maintain the level of prices then prevailing.

It is interesting in this connection to note that in the Old Colony Magazine of April, 1920, there was published an article by Governor Harding of the Federal Reserve Board entitled "The Process of Deflation," in the course of which he said:

"It would be recognized that credit extended to Europe created a demand for commodities that competes with the domestic demand, and this competition is one of the potent causes of high prices. The demand for commodities from domestic as well as foreign sources is so far in excess of supply that the increased cost of credit due to an advance in rates is absorbed in the price, and speculation anticipating large profits is not checked by any reasonable advance in rates of interest."

Thus Governor Harding was expressing the same thought as that of Secretary Houston in suggesting that the demand from foreign sources for our farm products is "one of the potent causes of high prices," and high prices seem to have been to the Federal Reserve Board worse than a red flag to a bull.

Further on Governor Harding said:

"It should, however, be repeated that the time has come for the System in the interest of commerce and business to exercise its power to regulate and control the credit situation."

The conditions of business in the country were such that Governor Harding wrote on them in the same article as follows:

"The purchasing power of the public growing out of high wages and large profits is greater than it has ever been before, and this purchasing power competing with export demands arising out of the needs of Europe, has raised prices to a point that takes no account of prudence. * * * *

The expansion of credit set in motion by the war must be checked. Credit must be brought under effective control, and its flow be once more regulated and governed with careful regard to the economic welfare of the country and the needs of producing industries."

We wonder if Governor Harding regards the present conditions as preferable to those which prevailed when the purchasing power of the public was greater then ever before, and before he undertook the campaign launched when he said that the time had come for the Federal Reserve System to "exercise its power to regulate and control the credit situation."

Mr. F. A. Vanderlip in the same issue of the Old Colony Magazine in which Governor Harding's article appeared, in urging a deflation of credit, which of course has been in entire harmony with the views of Wall Street, said:

"Now this does not mean that the Federal Reserve System is nothing but a vicious instrument of inflation, but it does mean that the thing is not fool-proof and it has to be rightly controlled if it is to function beneficially. Political control is the last thing it should be subject to, but this is the thing it is most likely to be subject to as the Federal Reserve Board is now composed."

Mr. Vanderlip's characterization of the Federal Reserve System as not being fool-proof, and especially when under political control such as he said then existed, is an interesting sidelight upon the management of the Reserve Board.

AMERICAN WORKERS HIGHEST PAID OF ALL

NOTHING better illustrates the higher plane of living of the American workman than the comparison of the rate of wages paid in different industries in the United States and other countries. It is true that living costs are high in this country but American workmen demand better living conditions and are enabled to enjoy them by reason of the relatively higher rates of wages received.

The following tabulation is compiled from a pamphlet on "Wages in the United States and Foreign Countries" prepared for the use of the Committee on Ways and Means of the House of Representatives, and graphically shows how much more workers in America receive for their labor than the same class of workers receive in other countries.

RESUME OF WAGES PER WEEK IN SELECTED INDUSTRIES 1920.

Industry	U. S.	Germany	Japan	England	France
Chemicals:					
Process men	\$31.03	\$6.04	\$4.00	\$18.71	.....
Common labor	18.75	5.52	4.50	13.32	.....
Pottery and China-ware:					
Potters and kiln placers	30.94	6.60	6.00	15.50	.....
Glass:					
Skilled workers	26.81	....	9.60	21.45	.....
	to 69.83		to 13.66	to 27.30	
Iron and steel:					
Mill labor	43.12	5.34	9.90	17.40	\$16.80
Woodworking:					
Cabinetmaking	27.21	5.75	9.90	19.68	9.36
Agriculture:					
Farm labor(*)	46.89	6.25	29.70(t)	32.76	28.56
Food and provisions:					
Bread baking	26.32	....	....	15.14	8.52
Candy making	19.87	5.28	6.30	13.65	6.48
Printing:					
Composition	45.00	....	8.70	17.70	.....
	to 50.00				
Textiles:					
Cotton weaving	20.86	4.35	4.56	12.39	9.12
Cotton spinning	....	....	4.80	11.24	.....
Woolen weaving	38.98	4.35	6.00	17.70	.....
Woolen spinning	39.33	4.74	....	15.58	12.00
Clothing (men):					
Tailoring and cutting	26.38	6.24	8.15	16.32	8.90
Boot and shoe	19.31	....	3.90	7.08	.....
	to 35.70		to 9.90	to 16.64	
Mining:					
Coal	45.00	5.00	....	25.00	7.90
Building trades:					
	to 50.00			to 10.50	
Bricklayers(t)	9.60	.82	1.75	.....	.....

(*) Per month with board.

(t) Per year with board.

(f) Per day.

Significant Notes of Industrial Recovery South.

Herewith are clippings from one day's gist of Southern newspapers chronicling a revival of industrial activities here and there throughout the South. This demonstration of a dawning business revival sounds a significant note of encouragement and should hearten those who are merely hesitant and undecided about getting into action at this time. Wherever conditions make it possible to resume activities, the steps should be taken for the cumulative effect on all business. For this reason, individual resumption of activities is a matter of more than ordinary moment just now. This one day's gleanings from our exchanges may be pondered with profit.—Editor Manufacturers Record.

Dantzler Lumber Co. to Reopen Big Mill.

Pascagoula, Miss., July 31—The L. N. Dantzler Lumber Co., of Moss Point, according to authentic report, will renew activities at Vancleave, Jackson county, Monday. The tram road and logging camps are being renovated preparatory to placing a large force cutting down timber for the mills on Escatawpa river.

Hopewell Factory Running Full Blast.

Hopewell, Va., Aug. 2—The Wood Products Company has been running full capacity for the last thirty days and, according to the general manager, F. B. Woodward, there are enough orders on hand to run the company three months. Within the next ten days six more machines are to be installed and it is expected that by that time the company will have enough orders to keep running full capacity.

The intention of the company was to place on the market all articles used in silk mills.

Decided Pick-up in The Industrial Situation at Birmingham.

Summarizing conditions at Birmingham a writer in the Age-Herald, Aug. 1, cites the following:

Doubling of production at the new tie plate mill of the Tennessee Coal, Iron and Railroad Company at Fairfield.

Continued speeding up of operations at the new pressed steel car works of the Chickasaw Shipbuilding and Car Company at Fairfield.

Continued operation of the rail mill of the Tennessee Coal, Iron and Railroad Company in Ensley at normal capacity.

Continued operation of the four blast furnaces of the Tennessee Coal, Iron and Railroad Company on basic iron for the steel mills at Ensley.

Blowing in of the second stack of the Woodward Iron Company at Woodward, a step necessitated on account of the complete denudement of the stock yards. The Woodward Company must make more iron if it wishes to remain in the iron business.

The Gulf States Steel Company, having made larger bookings of new business in the past 10 days than in previous several weeks, announces early resumption in its blooming mill department.

Ingalls Iron Works will continue at full turn in the manufacture of structural steel, among recent orders being one for steel for the Masonic temple.

Improvement in Pittsburgh District.

The general average of steel mill operations in the Pittsburgh, Youngstown and Wheeling districts is reported as somewhat higher this week, due largely to the starting of departments that have been idle in some cases for several weeks.

Coal Mining Activity South.

Charlestown, W. Va., Aug. 1—Last week's reports from the coal mining regions of the Southern States presents marked activities in the organization of new companies and the extension of established mining enterprises, many more propositions were named than for any week in many months. Of twenty-eight companies named, eighteen were new organizations and ten were extensions.

Langdale Mill Now on Full Time.

West Point, Ga., Aug. 2—The Langdale Mill, one of the big mills of the West Point Manufacturing Company chain of mills, began operating on full time Monday morning. The majority of the mills of this big company are now operating on full time, two of them both night and day.

Bigger Paper Output Reported in Richmond.

A Richmond (Va.) dispatch under date of Aug. 2, carries an article elaborating at length facts stated in the following headlines:

Investigator Finds Marked Progress in Blotting Business in the Capital City. New Mills Being Built.

Window Glass Plant to Reopen August 25.

Morgantown, W. Va., July 30—The United States Window Glass Company announced preparations for resuming operations at the Seneca plant in this city August 25. Fires were lighted this week and the plant will be ready to start at capacity in a month.

It is stated by company officials that a long period of steady running is ahead of the plant.

With the resumption, also, this week of the hot mills of the American Sheet and Tin Plate Company at Sabraton, local business interests feel greatly encouraged.

Flour Mills on Overtime.

Kansas City, Mo., Aug. 2—Milling plants in Kansas City are turning out flour on a larger scale than at any time in history. Production last week reached a total of 117,000 barrels, more than double the output a year ago. Mills while maintaining twenty-four-hour runs at a six-day period, are operating Sundays to fill shipping instructions.

Semet-Solvay Company to Resume Work.

Birmingham, Ala., July 31—The Semet-Solvay coke plant, which has been closed down for several weeks, will resume operations about September 1, according to authentic information given out in Ensley yesterday. Several attaches of the company lately returned from Syracuse headquarters for the Semet-Solvay company have been given to understand that the Ensley operations would not be down longer than the first part of next month. The Semet-Solvay plant employs about 350 men, and cokes a large tonnage of coal bought from commercial producers.

The American Steel and Wire company plant at Fairfield will operate six days this week. This operation should prove very beneficial to the district.

Turn In Business Tide Has Occured, Matthew Addy Co. Declares.

Confidence in a definite improvement in conditions, which will continue from now on, is expressed in the weekly market letter of the Matthew Addy Co., of Cincinnati, which follows:

It is a pleasure to write a market letter that has a touch of optimism. We try always to truthfully reflect market conditions and for the past several months a market letter has been a painful task. Today things are different. In all parts of the country we find indications of improvement. From the White House comes an official statement with a note of confidence that conditions are already improving and will continue in the right direction from now on. It points out that generally excellent agricultural production is assured for

the season, and calls attention to the work already accomplished which has resulted in the Federal Reserve Banks having reduced their discount rates. Judge Gary's reassuring remarks on present conditions reflect the views of keen observers and careful students who now contend that the bottom has undoubtedly been reached and that from now on, while the recovery may be slow, we are on the upward grade and production will increase. There is little likelihood of there being any startling change, as the thing will undoubtedly work slowly, but a steady progression and an advance thus made will certainly be on a much sounder foundation than any quick jump that might be made.

The volume of business is small but it is growing. In July our iron sales amounted to more than for many months past. We have a great many inquiries before us at the present time, ranging from carload to fifteen-hundred-ton lots. Bargain hunters are not having the picnic today that they did a few weeks ago. Several odd lots of iron which were ordered at low prices have been grabbed up by speculators who saw a good investment. It is a difficult thing to locate iron with any special analysis—buyers cannot be as particular today as they might have been a month or so ago. One Southern furnace that blew out several weeks ago with quite a stock on hand has less than five hundred tons unsold on the yard today, and that will probably be sold before the day is over. A Valley furnace has just turned down some business offered at current prices and announced that it has sold all of the iron on hand and will have nothing more to sell until the furnace resumes operations. These examples are forerunners of what will probably happen in the near future as it will take most of the furnaces who are now idle some time to blow in again.

While most of the sales that are being made are for prompt shipment, there is quite a little inquiry for delivery over the entire balance of this year.

Atlanta Residence Permits Feature the Month's Activities.

Atlanta, Ga., August 6—[Special].—July building records were smashed last month when permits having a value of \$1,933,822 were issued. The number of permits issued for new residences featured the month's activity, a total of 131 permits for this class of construction being issued. The total number of new residences approved since the first of the year in this city is 741.

Winston-Salem Building Program Goes Forward.

Winston-Salem, N. C., August 6—[Special].—During July approximately \$115,000 in new construction and repairs was approved by the building inspector. Most of the 100 permits issued were for dwellings costing up to \$15,000 each.

Greensboro Issues Permits Valued at \$130,000.

Greensboro, N. C., August 6—[Special].—For the month of July permits for new construction costing \$130,000 were approved here. The permit for the largest amount was issued for a \$25,000 Y. W. C. A. building.

Cumberland, Md., Building Permits Total \$85,000.

Cumberland, Md., August 6—[Special].—According to Ralph L. Rizer, city engineer, building permits having a valuation of \$84,684 were issued here during July, including 30 for new work and 10 permits for repairs, alterations, etc.

Lynchburg Permits for July Total \$82,575.

Lynchburg, Va., August 6—[Special].—During July the valuation of building permits for new structures and improvements amounted to \$82,575. This included 14 new structures and 12 improvements to established properties.

Austin Plans \$400,000 Hotel.

Austin, Texas, August 5—[Special].—An eight-story hotel to cost approximately \$400,000 is planned by citizens of this city through the Chamber of Commerce. It is to be 80 by 130 feet, of reinforced concrete and brick construction. Already more than \$250,000 has been subscribed for the erection of the building, according to Ben M. Barker, president of the Chamber.

Nashville Issues \$531,582 in Building Permits.

Nashville, Tenn., August 6—[Special].—During the past month 319 permits involving the expenditure of \$531,582 were issued. This included 41 brick and frame houses costing \$112,200 in addition to a number of dwellings of stucco, brick-veneer, etc. Many business buildings were also included in the month's total.

Richmond Building for July Totals \$1,428,220.

Richmond, Va., August 5—[Special].—The value of permits issued for construction of all kinds in this city during last month was \$428,220. This included: 9 brick dwellings, \$76,750; 23 frame dwellings, \$107,600, and one apartment, \$24,000. Permits for new work and repairs totaled 213.

Rock Hill Building Activity Increases.

Rock Hill, S. C., August 6—[Special].—During June and July a total of 52 permits for construction work to cost \$86,955 was issued here. Many residences are being erected, and building activity is being delayed only by the tightness of money, according to T. O. Flowers, building inspector.

Nearly 150 New Residences for New Orleans.

New Orleans, La., August 6—[Special].—Construction activity as indicated by building permits issued in July involve a total investment of \$761,350. Residence construction totals \$389,275, for which 144 permits were issued. Repairs and additions numbered 59, costing \$120,475.

Zapata County Field Brings in Second Well.

Hebronville, Tex., August 2—[Special].—The second well in the Zapata County field, a few miles southwest of here and about 30 miles from the Mexican border was brought in recently with a production under the pump of 250 barrels daily. This well is owned by O. W. Killiam and associates and is not far from the discovery well of the Mirando Oil Company. The oil is of a high lubricating grade.

Falling Off in Steel Ingot Production.

Steel ingot production for July, according to the American Iron and Steel Institute's figures, which cover about 85 per cent of total production, amounted to 803,376 tons. This is a falling off of 200,000 tons from June production, and nearly 2,000,000 tons short of the production of July, 1920. For 1920 the average monthly production was more than 2,860,000 tons as compared with the average monthly production of the last seven months of 1,402,000 tons.

Iron at \$18 in Birmingham.

A press report from Birmingham, Ala., notes the sale of 100 tons of iron of 2.75 to 3.25 silicon at \$19.50 per ton, which it is observed, is on the \$18.50 base with silicon differentials. It is also said that the Southern Pacific Company has practically closed a deal for 800 tons of iron at \$18 per ton.

Increase of Stock.

The Texas Electric Railway Co. has amended its charter to increase the capital stock from \$10,000,000 to 12,600,000 and to provide for an issue of \$2,160,000 of first preferred stock to retire debentures. The company has no construction plans in view at present.

EXTENSIVE GAS PIPE LINE SYSTEM TO BE CONSTRUCTED.

Large Interests Behind Plan to Connect Monroe Gas Field with Cities of Louisiana, Mississippi and other States.

Monroe, La., Aug. 8 [Special].—Three large interests, according to definite information here, are planning to connect the Monroe gas field with the centers of population in this and adjoining States.

These interests are the Union Power Company, controlled by J. S. Cullinan of Texas and the Frost-Johnson Lumber Company, who own one-fourth of the proven area of the Monroe gas field; H. C. Morris, who is at the head of the Dallas pipe line system, and the Columbia and Southern Carbon Companies and their affiliated interests.

The Union Power Company has executed a contract with the Fidelity Trust Company of Houston, Texas, to finance the Arkansas, Louisiana and Texas Development Company, a corporation that will construct a gas pipe line system for those interests. Plans of this combination are to connect the Monroe field with New Orleans, Baton Rouge, Alexandria and Lake Charles, La.; Beaumont and Houston, Texas; Vicksburg, Natchez, Jackson and Greenville, Miss.; Helena and Arkansas City, Ark.; Memphis, Tenn., and St. Louis, Mo. Engineers are now in the field surveying the lines. The Union Power Company is a Louisiana corporation, with headquarters at Shreveport.

H. C. Morris, who represents interests that control the Dallas gas pipe system, entered the Monroe field more than a year ago. He has leased an enormous acreage in the gas belt and is now drilling wells, two having been brought in. His engineers have been in the field for some time. Interests represented by him propose to construct gas pipe lines to New Orleans, Baton Rouge, Natchez, Vicksburg and other points. There is ground for belief that the Union Power Company and the Morris interests will ultimately get together and form a combination that will own and operate what will be the biggest gas pipe line system in the country.

The Columbia and Southern Carbon Companies and their affiliated interests have been conducting extensive surveys and investigations with the view of constructing gas pipe lines, but they are not yet ready to disclose their plans.

There is strong opposition to the carbon black companies operating in the Monroe gas belt, based on alleged waste or excessive use of gas. This opposition is threatening to put them out of business or materially curtail their use of gas. The issue will be fought out before the Louisiana legislature in September.

It is largely on account of this opposition that the carbon black companies are planning to go into the gas pipe line business. They have acquired large holdings in the Monroe field, and if the legislature restricts them in the use of gas, or legislates them out of business, which it has authority to do under the new constitution of Louisiana and under the decision of the United States Supreme Court in the Wyoming case, they must seek other markets for their gas. This can be done only by the construction of pipe lines to connect the fields with the consuming centers.

Carbon black interests, it is positively stated, are negotiating for extensive gas land holdings in the Terrebonne field, in South Louisiana. This indicates that those interests are planning an extensive pipe line system of their own that would connect both the Monroe and Terrebonne fields with large consuming centers.

The first business show ever staged in New Orleans will be held in that city from October 3 to 8. The latest types of office equipment and mechanical appliances.

Intensive Construction Activity at Dallas.

Dallas, Texas, August 5—[Special].—During the first six months of 1921 Dallas ranked second in the United States in building permits, based on per capita figures, and was twenty-first in rank in the aggregate value of permits, as compared with forty-second rank in population. For the first six months there permits totaling \$7,652,851, or a per capita valuation of \$49. Los Angeles alone, where the per capita valuation was \$60, ranked ahead of Dallas, according to D. C. McCord, Dallas building inspector. Dallas is now building at the rate of \$1,000,000 a month.

While but a portion of it would fall under the head of building permits, construction work under way or in early prospect by the city and county governments aggregates \$10,000,000. Of this about \$4,000,000 already is under construction. This activity in public work has been of great value in reducing unemployment to a minimum.

The city has under construction sanitary sewers to cost \$32,000; 12 street jobs to cost \$433,000 and a storm sewer to cost \$18,000. Other city projects soon to be realized are the \$450,000 filtration plant at White Rock reservoir; four garbage incinerators to cost \$50,000 each, and a \$150,000 nurses' home to be erected at the City Hospital, work on which is under way. The city has voted \$225,000 in bonds which are still to be sold and which will pay the city's half of the construction cost of the new city-county hospital. The city is also contemplating a storm sewer to take care of the Mill Creek flood waters which will entail the expenditure of \$1,700,000. This latter project, however, will not be realized for some time.

Bridge and road work under way for the County will cost about \$2,700,000. In addition there are projects which will cost \$4,400,000, for which bonds have been issued but not sold, which will be under way within a short time. \$15,000 is to be expended in changing the pavement on the Oak Cliff viaduct, \$100,000 is to be spent at the county poor farm, \$114,000 is to be spent at Levee District No. 3, and \$500,000 will be spent at Levee District No. 10, provided the plan to make a lake of the Trinity River bottoms adjoining Dallas is rejected.

Permit Granted for Santee Canal—Complete Project to Cost \$5,000,000

Columbia, S. C., Aug. 5 [Special].—The Federal Power Commission has just granted to the Columbia Railway and Navigation Company a permit for the building of the Santee Canal, joining the waters of the Santee and the Cooper Rivers. G. A. Guignard is president and T. C. Williams vice-president and general manager of the Company.

It is claimed that this project and its associated undertakings will revolutionize transportation in South Carolina. It is proposed to dig a canal 23 miles long, to build an electric railway line from Columbia to Greenwood, 70 miles, and to put upon the Congaree and Santee Rivers a sufficient number of barges and light draught towboats to move freight rapidly between interior points and Charleston.

The construction plans call for canal locks and other portage facilities and a power dam, at or near Monck's Corner. The Company also proposes another power dam on the Saluda River, at the mouth of Bear Creek above Columbia. A total of 65,000 horse power is thus possible of development, it is declared.

The Canal will shorten by 72 miles the distance between Columbia and the Atlantic, giving a total all-water route to Charleston of 138 miles.

It will require \$5,000,000, in round numbers, to complete the entire project and two years to do the work. Eastern interests are said to have practically agreed to finance the undertaking.

Manufacturing Census of Maryland.

According to a preliminary statement of the Census Bureau, the 1920 manufacturing census for Maryland shows that the amount of capital invested in industrial enterprises increased 111.3 per cent in 1919 over 1914 and the value of products increased 131.4 per cent. Though the number of persons engaged in manufacturing increased by 26.2 per cent in 1919 over 1914, during this period salaries increased 164.4 per cent and wages 174.9 per cent.

The amount of invested capital in 1919 was \$619,607,000, compared with \$293,211,000 in 1914, or a gain of \$326,396,000 or 111.3 per cent.

The value of manufactured products increased from \$377,749,000 in 1914 to \$873,945,000 in 1919, or 131.4 per cent.

However, some idea of the phenomenal recent manufacturing development is found in the fact that in Baltimore alone during the last two years, according to the annual summary of the Board of Trade, there was a total of 164 entirely new industrial establishments and 236 expansions of original plants, requiring a total of 52,842 employees and an aggregate plant investment of nearly \$96,000,000, practically none of which is included in the 1919 figures.

A comparative summary for the State for 1914 and 1919 follows:

	1919.	Census.	1914.	Per Cent of Increase*
				1914-1919.
Number of establishments.....	4,937		4,797	2.9
Persons engaged in manufactures.....	165,757		131,391	26.2
Proprietors and firm members.....	4,993		5,005	-0.2
Sal'ried employees.....	20,394		14,801	37.8
Wage earners (average number).....	140,360		111,585	25.8
Primary horsepower.....	406,763		263,753	54.2
Capital.....	\$619,607,000		\$293,211,000	111.3
Services.....	189,871,000		71,801,000	164.4
Salaries.....	42,012,000		18,009,000	133.3
Wages.....	147,859,000		53,792,000	174.9
Materials.....	549,347,000		238,972,000	129.9
Value of products.....	873,945,000		377,749,000	131.4
Value added by manufacture (value of products less cost of materials)	324,597,000		138,777,000	133.9

*A minus sign (—) denotes decrease.

Manufacturing Census Summary of Louisiana.

The preliminary statement of the 1920 census of manufactures in Louisiana, as given by the Census Bureau, shows an increase in every item running from 9.4 per cent gain in primary horsepower to an increase of 172 per cent in the value of materials used.

Capital invested increased from \$261,635,000 in 1914 to \$463,860,000 in 1919, or 77.3 per cent; the value of manufactured products increased from \$256,313,000 in 1914 to \$676,190,000 in 1919, or 164.8 per cent; and the number of establishments increased 18.4 per cent with an increase of 27.9 per cent in the number of persons engaged, while the service cost of production, wages and salaries, increased 131.7 per cent.

A comparative summary for the State for 1914 and 1919 follows:

	1919.	Census.	1914.	Per Cent of Increase*
				1914-1919.
Number of establishments.....	2,617		2,211	18.4
Persons engaged in manufactures.....	112,602		88,014	27.9
Proprietors and firm members.....	2,042		1,850	10.4
Sal'ried employees.....	12,216		8,499	43.7
Wage earners (average number).....	98,344		77,665	26.6
Primary horsepower.....	388,805		355,193	9.4
Capital.....	463,860,000		261,635,000	77.3
Services.....	117,500,000		50,712,000	131.7
Salaries.....	23,094,000		11,168,000	106.8
Wages.....	94,406,000		39,544,000	138.7
Materials.....	429,404,000		157,886,000	172.0
Value of products.....	676,190,000		255,313,000	164.3
Value added by manufacture (value of products less cost of materials)	246,786,000		97,427,000	153.3

Building Rising Rapidly in Owensboro, Kentucky.

Owensboro, Ky., August 5—[Special].—More building is in progress here than during any preceding summer. Work is under way on a \$100,000 furniture factory, a \$60,000 church building and a church addition to cost \$30,000.

State Chamber of Commerce Proposed for North Carolina—To Organize in September.

Chamber of Commerce.

Charlotte, N. C., August 5.

Editor Manufacturers Record:

North Carolina is rapidly forging to the front, as evidenced by the fact that she is becoming one of the leading manufacturing States, fourth as an agricultural State, stands approximately seventh as a Federal Revenue producer in taxes, first in the manufacturing and raising of tobacco; has the lowest foreign-born population, and twenty-third as a stock-raising State. The General Assembly of North Carolina at its session in January appropriated fifty million dollars for the construction of hard-surfaced highways. In addition thereto the several counties of the State have voted approximately twenty-five million dollars, giving us a total of about seventy-five million dollars to spend on good roads.

A plan is now being worked out to organize a State Chamber of Commerce for the purpose of the better advertisement of our natural resources, climatic conditions, scenic beauty, to promote co-operative marketing and further encourage the agricultural and dairying interests, and building up of a greater industrial and manufacturing center. We are planning some time in September to call a meeting of all agencies and interests of the State in one great convocation in Greensboro to perfect the necessary machinery to sell North Carolina and her interests to the world. It shall be our earnest endeavor to induce new capital to come to our State which heretofore has been going to South America and other foreign markets; further, we hope to persuade a number of the high-class farmers of the Middle West and Central States who are selling their lands and moving into Canada to come to North Carolina. God has given Western North Carolina natural parks which will soon be thrown open to the world through the medium of good roads and better railroad transportations. The bowels of the earth of the western part of our State are tremendously rich in mineral resources and the hills covered with virgin forest. The scenic beauty of Western North Carolina is equal to that to be found anywhere in the United States and the climatic conditions unsurpassed.

The great Piedmont section is fast becoming the center of the biggest hydro-electric of the United States. We are supplied with almost inexhaustible water power, which is being rapidly harnessed and used for manufacturing industries and the manufacturing and selling of electric power. The Piedmont section bids fair to be the manufacturing center of the United States in the next few years.

It is the purpose of those who are backing the proposed State Chamber of Commerce to use every effort to see to it that North Carolina manufactures all her raw products and that her citizenship derives the dividends on the finished products instead of on the raw products. The last legislature in addition to voting large sums of money for roads also appropriated large sums for the adequate advancement and maintenance of our school system. North Carolina's wealth approximates four billion dollars, and we believe with a State Chamber of Commerce properly organized will speed the Old North State on to undreamed of wealth and advantages.

T. L. KIRKPATRICK,
Pres.

Norfolk Building Operations Total \$316,381.

Norfolk, Va., August 6—[Special].—Building operations in this city as indicated by the report of the building inspector for July involve the expenditure of approximately \$316,381. Three apartments, costing \$117,000, and 27 dwellings, costing \$122,456, are included in the total.

\$1,000 000 GRAIN ELEVATOR TO BE ERECTED. Western Maryland Railway to Build New Structure At Port Covington—Bids August 15.

A new grain elevator costing over \$1,000,000 will be erected at Port Covington, Baltimore, by the Western Maryland Railway. The new structure will be a duplicate of the elevator erected there by the railway in 1916 and the two buildings will have a capacity of 3,000,000 bushels of grain. The new elevator will be fireproof, of reinforced concrete and have a deck 247 feet long. Bids on the work are due August 15. Several local and out of town contracting firms have been invited to bid, among these being the James Stewart Co., the George Fuller Co., and the M. A. Long Co.

Logan Building Activities Smashing Records.

Logan, W. Va., August 6—[Special].—Indications are that the building activity under way in this district will surpass all previous records, and probably will involve the expenditure of \$1,000,000 for the year. In this place alone more than 100 homes and business houses are being erected. The capacity of the electric light and power plant is being doubled, and the Chesapeake & Ohio Railroad is building a new freight depot, and will probably erect a new passenger station in the fall. At Holden, ground has been broken for a \$100,000 school building. The road construction program for which about \$500,000 is available is being vigorously pushed. Most of the hundred or more nearby mines are being worked in spite of market conditions. Business is generally active throughout the district.

Charlotte Building Program for July over \$150,000.

Charlotte, N. C., August 5—[Special].—New construction during July in this city will necessitate an expenditure of \$156,845, half of which is for residences. Since the first of the year the number of residence permits issued is 129. During July, 19 were started, costing \$81,335, the average cost being \$4,300. Construction of a warehouse to cost \$40,000 was approved.

A Great Bridge at Philadelphia.

Construction of a great suspension bridge over the Delaware River is to begin in Philadelphia on September 5, Labor Day, according to announcement, the location of the bridge having been decided upon after a careful consideration and study of several sites. The report of the board of engineers, composed of Ralph Modjeski, chairman; George S. Webster and Laurence A. Ball, to the Delaware River Bridge Joint Commission has recommended that the Philadelphia end of the bridge be on Sixth Street, midway between Race and Vine Streets and opposite Franklin Square, the structure going thence eastward straight across the river to Pearl and Second Streets in Camden, N. J., there curving southward to Penn Street at a point midway between Sixth and Seventh Streets. At each end will be ornamental treatment of the street approaches.

It is said that this will be the greatest suspension bridge in

the world and that it will have a span of 1750 feet over the river at an elevation of 135 feet above mean high water for a distance of 800 feet. The main piers will be of steel 380 feet high above water and the two huge cables suspending the bridge will be 30 inches in diameter. Expansion and contraction resulting from variations of temperature will be taken care of by the steel towers, which will be so constructed that they can bend according to the stresses they are required to sustain. The maximum loads on the bridge will also be thus provided for. The bridge and its approaches are to be built with single deck carrying an unobstructed roadway for six lines of vehicles, also two lines for surface trolley cars and two lines for rapid transit cars. Above the roadway will be two foot sidewalks. The main deck will be 125 feet wide.

The cost of building the bridge would be divided as follows: State of Pennsylvania, \$8,221,000; City of Philadelphia, \$8,221,000; State of New Jersey, \$12,429,000. Total \$28,871,000. It is said that Pennsylvania has \$1,750,000 immediately available and which can be used until the Legislature meets again in 1923. Philadelphia has appropriated thus far only \$250,000, of which \$25,000 has been spent. It appears probable that bonds will be issued by the city to provide the remainder. New Jersey has \$28,000,000 of bonds available, it is said, for the North Jersey tubes under the Hudson River and for the Delaware River bridge. Estimates call for about an equal division of this sum for the two crossings.

It may be recalled that the plans for erecting the long-discussed suspension bridge over the Hudson River at New York City are also being advanced with prospects of a decision. If built according to present plans it will have a huge main span of 3240 feet. Then there is the projected suspension bridge between Detroit, Michigan, and Windsor, Ontario, which it is said can be finished in five years if a decision is soon attained. It is to have a main span of 1805 feet at 110 feet above the water. Thus there are three great projects for crossing large and important bodies of water with enormous bridges, and which may soon be put into execution. It is expected that the Philadelphia-Camden bridge can be completed by the year 1926 in time for the celebration of the sesqui-centennial of the Declaration of Independence.

Cannot Compete with Cheap German Aluminum. To Secure Arkansas Bauxite Hereafter.

New Orleans, La., August 6—[Special].—Because of the competition of cheap German aluminum ware, the Aluminum Line of steamships operated by the American Bauxite Company in the trade bringing bauxite from Dutch and British Guiana to New Orleans, will be closed November 1, it is announced by I. G. Calderwood. It will be closed indefinitely, he adds—until there is a duty on German aluminum ware that makes competition possible. The company will henceforth get the bauxite it needs from its mines at Bauxite, Arkansas. There are 60 years' supply there at the present rate of consumption, it is stated.



PROPOSED HIGHWAY BRIDGE OVER DELAWARE RIVER BETWEEN PHILADELPHIA AND CAMDEN

The Open Shop as Viewed by Employers Throughout the Country

[Since the announcement by the Manufacturers Record of the fight of practically all operating printers in Baltimore against the 44-hour demand of the Typographical Union and the determination of Baltimore operating printers to work on the open shop basis, the Manufacturers Record, because it has been fighting for the open shop for many years, has been overwhelmed with letters coming from business men in all parts of the country. The subject has commanded the thoughtful attention not only of employers of labor, but of teachers and ministers and others who realize that the union shop, as now dominated, is a distinct and definite plan for breaking down efficiency of labor, lessening the productive power of working men, and, therefore, lessening their moral stamina and their sense of right and wrong, and they have been as deeply interested in all phases of this question as have employers themselves. Some of these many letters have been published from time to time, beginning in our issue of July 7.—Editor Manufacturers Record.]

"Give Me Liberty, or Give Me Death!"

Wm. C. Seddon.

Broker

Baltimore, Md., June 21, 1921.

I am glad to see that you are the champion of the open shop, and realizing that your magazine is the only one I know of that is fearless in expressing its opinions, and pushing what it believes to be for the good of the country, I wish to offer some suggestions, which may help you in the matter.

During our late Administration the labor unions took advantage of Congress and the Executive Head of the Government and had laws passed, which practically gave control of many things to the labor party. Of course the passage of the Adamson Law and the Clayton Act was in favor of labor and disregarded the good of the general public. These two laws should be repealed, and it is possible that Congress, now knowing that labor does not control the elections, as indicated by the surplus of seven million votes, which were cast against the action of the previous Administration, will repeal these laws.

The open shop is a fair shop, since it employs labor regardless of their being members of a union or not, but it does not tolerate any dictation from the labor unions, and it is perfectly right that wages should be agreed upon between employer and employee, and if this plan is followed, harmony will exist.

The position of labor, as seen by me, who have been always friendly to labor and not against it, is right, but I am inclined to look askance at labor leaders. Unfortunately, labor leaders were not very particular in examining closely the men they took in, of late, and in that way, a lot of radical anarchists, you may say, crept into the ranks of union labor.

Labor has now the opportunity of its lifetime to show that it wishes to do the right thing, and the leaders should impress upon their followers the changed conditions that now exist and should induce them to volunteer a reduction of wages, to conform to the reduction in the cost of living, as compared with what it was during the war. If they did this, they would win the admiration and approval of the general public. In as much as they do not seem to realize the importance of this move, I think it becomes necessary for employers and capitalists to resort to open shop methods.

I do not go so far as to open what may be called non-union shops, because there are a number of worthy laborers, who belong to the union, who should not be turned off simply because they are members of it. If all of the industries are worked by open shop methods, I believe that this method will prove the solution of the whole question, and within a short time, those who are working in the open shop will realize that they are free to work where they may wish instead of being dominated by their leaders, and in consequence of the harmony that will exist between employer and employees, all parties will be better satisfied, than under the dictatorship of the unions. It stands to reason that there is no liberty enjoyed by the individual, if they are dictated to as to where they shall work, how they shall work, and how long they shall work, and at what price they shall work. Some men can work a short time, with efficiency, others can work a longer time, even as long as twelve hours, if they wish, with efficiency. Therefore, if the method of paying the laborer by the hour is adopted, it will suit all classes of men.

I think the experiment started and now pursued by the United States Steel Corporation proves conclusively that the open shop has met with great favor, and as it is better under-

stood and meets with the approval of the whole country, it will be adopted, and thus we will be free from the domination of the labor unions, and also every man will have what he appreciates so much, his liberty of action. I do not think that there was ever a sentiment expressed more forcibly than that by Patrick Henry, when he said "Give me liberty or give me death". As it stands now, no union man can boast of having his liberty.

WM. C. SEDDON.

Individual Liberty and Economical Production.

The C. & G. Cooper Company,
Engine Builders.

Mt. Vernon, O., June 21, 1921.

What you say concerning the significance of the fight for the open shop is in our opinion entirely sound and we appreciate your efforts in behalf of this policy, which means so much to individual liberty and economical production in Amer. a.

B. B. WILLIAMS,
President.

Independent, and Expect to Continue So.

Keystone Driller Company.

Beaver Falls, Pa., June 14, 1921.

We want to say that we have been fighting for the open shop actively since 1902, at which time the unions attempted to take control of our affairs. We objected at that time, and later on, in 1911, we had a very hard struggle with the molders' union, but in both cases we won out and remain independent, and expect to continue throughout our business existence. We are, therefore, right with you on your campaign and will do what we can to assist.

F. W. RANSOM,
Treasurer.

Voicing Sentiment of Country.

Binney & Smith Co.

Blacks, Colors, Clays, Chemicals, Talc.

New York, N. Y., June 16, 1921.

We have noted with interest your fight for the open shop, as expressed in your publication, and your successful effort in getting out your Daily Bulletin promptly under the most trying conditions on account of the attitude of union labor.

We feel you are voicing the sentiments of a great many employers, and wish you every success in your aggressive campaign. You may be assured of our hearty co-operation.

J. E. ROAN,
Secretary.

Employer Has Rights as Well as Employee.

Associated Manufacturers of Water Purifying Equipment.

Pittsburgh, Pa., June 15, 1921.

We are certainly in thorough sympathy with your ideas, and earnestly believe that the open shop should be maintained at all hazard.

We have every sympathy with the workingman and the importance of his condition, and for the highest wages compatible with conditions, but are thorough believers in the ability of every concern to have the right to operate their own business without dictation from anybody, and wish you all success.

F. B. LEOPOLD,
Of Executive Committee.

NEWS AND VIEWS FROM OUR READERS

[Publication in this department of letters from our readers does not mean that we either approve or disapprove the views expressed. We believe in a full and frank discussion of the mighty questions of the hour, for only in this way can the truth be found. Therefore we often publish letters with which we do not agree.—Editor Manufacturers Record.]

Truths That Should Jolt the Inert.

B. P. TEMPLETON, Delvalle, Travis Co., Tex., Route 1.

I am writing from the back-woods to congratulate you upon the truths and good common sense contained in the Record of June 23, especially your letter to Secretary Mellon, the editorial, "Stop Lending American Money to European Governments," and Mr. A. F. Thomas' letter to you and his brief to the Banking and Currency Committee—in short, everything the Record says.

Every man in this Nation ought to read the issue of June 23. If it did not open his eyes and start him to thinking nothing short of abject subjection to financial robbery, bankruptcy and poverty would do so.

Bully for Sims and Harvey! Truths concealed is a part of what is the matter with us. The trouble in Ireland is none of our business. Are not the Canadians, Australians, South Africans and all other peoples in the British Empire as free as we are? Could not the Irish enjoy the same state of freedom if they would? But the Sinn Feiners are not satisfied with peace; they want trouble, and if they had the power they would destroy this government as well as the British Empire. They are as Bolshevik as the Russians.

Increasing Centralization of Government.

C. A. PRICE, Portsmouth, Va.

Referring to your editorial of May 12, on the dangers lurking in the Smith-Towner Bill, I presume to call your attention to a condition from which perhaps a parallel may be drawn.

As you know the National Government has for some years appropriated funds for the improvement of highways; the popular belief being that for each dollar a state or county appropriates for highway purposes, the National Government duplicates. This is a false belief, yet it is always used by auto associations, chambers of commerce, etc., engineers, etc., to obtain funds either by direct taxation or by bond issues.

Without entering into the merits or demerits of this National appropriation for highways, I wish to call your attention to the following: Some county in Arkansas has bonded and taxed itself to such an extreme, that there has been considerable complaint. You may have seen the articles in N. Y. Times which fully gave details. Senator King now proposes to investigate the use of all funds, etc., in all states. All right. They certainly cannot investigate Federal funds, without also investigating state and county funds, as part of the funds came from the latter sources, not 50-50 per cent basis though as popularly supposed.

Senator Townshend has a new bill that proposes a National Commission, sitting in Washington only, that shall prescribe the roads in the states that shall be improved with Federal funds and state funds; no county or district funds will be recognized. Also that this commission shall have the power to order the states to maintain, in such manner as the commission shall prescribe, any and all roads in which Federal funds have been used in building. Also that no road project shall be approved by this commission until the state has made adequate provision for such highways. Also that the right of ways shall be not less than 26 feet wide and the roadway constructed of a durable material, shall be not less than 20 feet wide.

Many other provisions. The bill is described as having

teeth. Teeth to know the states to the bone, and then the bones, I judge.

Representative Dowell has also introduced a bill, described as less drastic.

If the centralization of power in Washington continues as it has during the past 10 years, in a very short time we shall have a more centralized government than Germany ever was—yet, we went to war to destroy autocracy and to "make the world safe for democracy." What a mockery!

I shall take pleasure in reading one or more of your vigorous editorials drawing parallels, (if you see them), and a warning to rally for states rights.

To read your masterful English is an education, not only in expression, but in common sense and patriotism.

Fighting for the Workers Against Unionism.

FRED C. MAIN, Wytheville, Va.

I have been reading with much interest for some time your articles, especially your firm stand against unionism.

It is a great pity that the public at large is not more familiar with the root of so much evil and I am sure that a large per cent of workers, whose efficiency and productive ability is harnessed by radical leaders, who fix a time limit on work and a piece limit on this time, will be as much, if not more interested in your stand than employers, since it is a fight for them but directed against their radical leaders, the workers being unable to throw off this yoke themselves or in other words making a living and not be owned and controlled by some radical leader, who is thinking more about how much money he can drain out of their pocket, than about their welfare.

The fight that you are waging against radical unionism in laying existing facts before the public, means more than can be estimated in advancing progress and efficiency and the welfare of the laboring man.

A good example of inefficiency of one of the many rules of union radicalism is the following: A fast New York train engine broke down at East Radford, Va., a few weeks ago, a leaking steam pipe being the trouble. A mechanic was sent for from the railroad shops, he arrived promptly and in looking over the situation said: "This is not a mechanic's job, it will have to be done by a steamfitter." The engineer replied, "Lend me your tools, I can fix it in a minute"; but owing to the radical rules of this mechanic's union he refused and so a steamfitter was then secured, mending the needy part in due time after he arrived but the train had been delayed thirty-five minutes. This is only one of the many momentarily occurrences of union inefficiency.

You are putting up a good fight and its value to the public must not be underestimated.

Cold Storage Plant Wanted.

G. C. Richardson, secretary of the Chamber of Commerce, Cisco, Tex., writes that there is a good opening for a cold storage plant in Cisco. The town is now building a \$1,000,000 dam for the impounding of 15,000,000,000 gallons of water. This dam is expected to be of much service, says Mr. Richardson, in the effort which the town is making to develop its resort possibilities.

RAILROADS

Winning Out in Spite of Strike.

President B. A. Worthington, of the Cincinnati, Indianapolis & Western Railroad Co., Indianapolis, Ind., in a statement concerning the unauthorized strike which started in the Moorefield, (Indianapolis) shops of the company on July 22, says:

"We placed advertisements in the Saturday afternoon and Sunday local papers and by Tuesday evening we had hired all the new men we needed, with the exception of 13 boiler-makers, 2 engine inspectors, 2 boiler inspectors and 1 blacksmith, although 20 machinists, 3 boiler-makers and 1 blacksmith arrived this morning, July 27, from out of town and we have numerous telegraphic advices that men in these crafts can be furnished promptly from out of town sources in practically unlimited numbers."

When the strike occurred all the foreman were mustered into service to protect engine dispatchments, etc., and 25 laborers refused to join the strikers.

Continuing Prest. Worthington says: "Not a single engine has been delayed in getting out of roundhouse and there has been no interruption of traffic. Everything is running as smoothly as could be expected with a shop full of new men who are gradually being assigned to positions for which they are best fitted. Furthermore, in taking on new men we are eliminating all of the objectionable features of the national agreements and returning to piece work in our car shops."

"During the progress of the strike the movement of freight traffic has increased appreciably. Each day we have handled over 25 per cent more than the recent daily average number of loaded cars and yesterday, (Tuesday July 26) the increase amounted to 40 per cent—more loads than we have handled in any single day for several months past."

Equipment.

The Wheeling & Lake Erie Railway has received 300 steel gondola cars of 50 tons capacity from the Standard Steel Car Co., of Pittsburgh, this being part of the road's order for 1500 cars of this type. These cars will take the place of old wooden gondola cars and will be largely used for transporting ore from lake ports to the National Tube Co., of Wheeling, W. Va.

The Interstate Commerce Commission has approved the proposed sale by the Illinois Central Railroad Co. at not less than 93% and interest of \$8,000,000 of 6½ per cent 15 year bonds which are to be secured by collateral as heretofore stated.

The application of the New Orleans, Texas & Mexico Railway to issue \$533,700, of first mortgage bonds, Series A, as collateral security for a note was also approved.

Double Tracking for Big Coal Traffic.

Huntington, W. Va., August 6.—(Special)—The Chesapeake & Ohio Railway which is double-tracking its Barboursville branch penetrating the great Logan county coal field, has just put in operation 3 miles of second track which has been completed between Martha and Inez. Double tracking between Barboursville and West Hamlin, 17 miles has been finished, excepting three miles between Inez and West Hamlin. Several months ago double track between Peach Creek and Big Creek 14 miles was completed and there yet remains 31 miles of double-tracking to be done between West Hamlin and Big Creek and Inez and Salt Rock. It was necessary to double-track to handle the large coal traffic originating in the Guyan region and it is hoped to have all completed before next summer.

Important Railroad Obligated to Stop Operation.

The Missouri & North Arkansas Railroad which operated 368 miles of line from Helena, Ark., to Joplin, Mo., 335 miles of which are owned by the company, suspended operations at midnight July 31 in accordance with an order of court to the receiver. As previously reported the suspension of this important railroad was in a large part the result of the sabotage practiced by the strikers since wage reductions were announced in February last.

It is noted in connection with the announcement of the suspension that from Seligman, Mo., to Searcy, Ark., the road crosses seven counties, five of which have no other railroad; in the other two the largest towns are along this line. Now 200,000 persons living in these seven counties will be dependent on old fashioned freight wagons for transportation because many of the mountain roads in the Ozarks are impassable for motor vehicles. Eureka Springs, Ark., and Harrison, Ark., the latter being the headquarters of the railroad, will probably suffer less than other places. From Eureka Springs to Seligman, 21 miles, is an excellent highway and the latter point is on the St. Louis-San Francisco Railroad. Harrison is only 10 miles from Bergman on the Missouri Pacific Railway and a good road connects the towns with regular bus and jitney service.

But in the northwestern part of Arkansas there are, it is stated, a dozen towns with industrial plants, mostly lumber and woodworking establishments, that will be seriously affected by the stoppage of railroad trains and thousands of persons depending on these industries for a living will be thrown out of employment.

An effort was made to secure continued operation for at least part of the line, but the receiver, it is stated, demanded a guarantee from responsible citizens that any loss sustained would be made up to the road, and owing to inability to obtain a sufficient guaranty, the effort was abandoned. The receiver stated that the road was losing \$90,000 a month.

Baltimore & Ohio Shows Improved Earnings.

The Baltimore & Ohio Railroad statement for June shows railway operating revenues, \$16,316,023.75; decrease as compared with the same month of last year, \$1,268,883.29; railway operating expenses, \$14,987,705.31; decrease, \$1,813,790.48; net revenue from railway operations, \$1,328,318.44; increase, \$544,916.19; net railway operating income after deductions covering taxes, uncollectible revenues, rents, etc., \$921,132.93; increase, \$908,482.85, there having been a deficit of \$587,349.92 in June 1920.

It is to be noted, however, that but for the fact that in settling with the Government for account of the guaranty period it was necessary to take up in June certain sums, the total earnings for the month would show \$16,718,390.67 and the net operating income \$1,643,159.23.

The figures for the first six months of the current year show that railway operating revenues on June 30 totaled \$96,230,951.40; decrease, as compared with the corresponding period of last year, \$3,555,770.83; operating expenses, \$83,432,781.26; decrease, \$12,283,934.32; net revenue from railway operations, \$12,798,170.14; increase, \$8,728,163.49; net railway operating income after deductions \$7,630,464.61; increase, \$7,245,937.01.

Atlantic Coast Line Earnings.

A statement of Atlantic Coast Line results for the first six months of this year shows that the system's operating revenues for the period were \$36,615,406, operating expenses, \$31,308,879, and net operating revenues, \$5,246,527, the operating income after taxes, being \$3,646,527. Operating income for the same period of 1920 was only \$2,666,551.

Railroad Financing.

A settlement has been reached by the Missouri Pacific Railroad with the Railroad Administration, according to an announcement in New York, the company receiving \$9,000,000 for all claims arising under federal control. This does not, it is further stated, include what the company might receive for the six months guaranty period that followed the termination of government control.

A dispatch from Springfield, Illinois, says that the state railroad authorities have empowered the Illinois Central Railroad Co. to issue bonds to the amount of \$16,000,000 to cover improvements already made.

Application has been made to the Interstate Commerce Commission by the Baltimore & Ohio Railroad Co. for authority to issue \$2,447,000 of bonds of its Toledo-Cincinnati division, these being 6 per cent first lien and refunding mortgage securities, and to pledge them when needed as collateral for short term loans.

The Texas City Terminal Railway Co. has been authorized by the Interstate Commerce Commission to issue \$1,984,300 of 6 per cent, 20 year first mortgage bonds and 5,000 shares of common stock to pay for its terminal property at Texas City, Texas.

Authority has been given by the Interstate Commerce Commission to the Alabama, Florida & Gulf Railroad Co. to issue for cash \$150,000 of 7 per cent first mortgage bonds to cover extensions lately announced.

Increasing Movement of Freight.

There were 790,348 cars loaded with revenue freight during the week ended July 23, according to a statement issued by the Association of Railway Executives, Washington, D. C., this being 14,096 more than were loaded during the previous week. The principal increases were in the loadings of grain and grain products, the number of cars so loaded being 64,919 or 29,442 cars more than in the same week of 1920 and 13,374 more than in the same week of 1919. This was also 7804 cars greater than the highest loading of this class for any week since January 1919 when the car service division records were started. From June 1 to July 28 inclusive 362,800 cars were loaded with grain and grain products or 100,000 more cars than were so loaded in the same period last year and 83,400 cars more than in 1919. Loadings of cars with miscellaneous merchandise and miscellaneous freight increased 4804 during the week ended July 23 the total being 467,889 cars.

Surplus cars on July 23 numbered 350,772, a reduction of 21,278 cars for the week

First Train Celebrated With a Barbecue.

A report from Eliasville, Texas, notes the operation of the first train over the Wichita Falls & Southern Railway extension from Newcastle via Graham to Eliasville, whence construction is in progress south to Breckenridge, 44 miles from Newcastle. The arrival of the train at Eliasville was celebrated in typical southwestern style, according to the report in the Dallas News, which says that "the well rounded carcasses of ten beeves, barbecued to a lively brown tone by the Eggers boys, whose father before them barbecued meats for Eliasville reunions more than a generation ago, furnished food for several thousand home folks and visitors at noon." Among the visitors was Frank Kell, general manager of the railway, accompanied by H. T. Taylor, a banker, also of Wichita Falls. The new road will provide transportation facilities for the oil fields at Eliasville. In the speechmaking after the barbecue Mr. Kell predicted that an era of substantial prosperity was approaching.

Business Men Protest Burdens of Railroads.

The National Association of Manufacturers, the National Founders Association and the National Erectors Association have issued a circular letter with a copy of a petition addressed to the United States Railroad Labor Board relative to the case of the Federated Shop Crafts vs. the Pennsylvania Railroad, the object of the petition, it is said, being to determine whether the petitioners or others similarly positioned may intervene in a dispute at issue before the Board when the circumstances of the case affect the paramount public interest in uninterrupted and efficient transportation at reasonable cost.

The letter continues, saying "as shippers we cannot secure material, employ labor, or distribute commodities unless the paramount public interest, is uninterrupted, adequate and efficient transportation at reasonably cost is assured. We therefore, seek an opportunity to respectfully submit to the Board that neither management nor men ought to be required or permitted to enter upon any form or circumstances of employment relation which menaces service with interruption, burdens it with artificial costs, impairs the power of management to perform their primary obligations to the public, deprives unorganized employees of equal rights or opportunities under public law or decision, or, on the other hand, prevents legitimate organization exercising any reasonable power, which does not imperil the public interest.

At the present moment railroad recovery is vital to business recovery. Lower freight rates require lower railroad costs. No employment relationship imposing uneconomic burdens on transportation is tolerable any more than conditions which do not insure to the men just compensation for honest service. The security of social life, the revival of railroad credit and its organized buying power, the continuity, adequacy and efficiency of transportation service rest largely upon an adjustment of railroad labor relations upon an economic basis in accordance with American principles, traditions and law."

Very Heavy Grain Shipments.

The Association of Railway Executives, Washington, D. C., reports now the heaviest movement of grain and grain products on the railroads of any time within the last three years. From June 4 to July 16 inclusive 297,881 cars were loaded with such freight or 67,403 cars more than in 1920 and 70,043 cars more than in 1919, in the same period. In the last week of the period this year 56,991 cars were loaded or about 19,000 more than in the previous week. In the same week of 1920 the loadings were only 33,967 cars and in 1919 only 45,466 cars. Seventy-five per cent of the Texas crop is already loaded.

Reduced Grain Freight Rates.

New Orleans, La., July 30,—(Special)—Just as New Orleans business men were beginning to fear that the immense grain business of the port would suffer as a result of the new rate established by the Interstate Commerce Commission to Eastern ports, on the basis of three cents per 100 pounds cheaper, the Southern Railway and the Illinois Central Railroad announced a three cent reduction on grain to this port. The new rate goes into effect August 11. It should enable New Orleans to hold its place as the country's greatest grain port, dealers here say.

400,000 Railroad Ties from the South.

A contract to creosote 300,000 cross ties for the Pennsylvania Railroad has been awarded to the Eppinger & Russell Company, Jacksonville, Florida. The railroad company, it is further noted, will also have shipped to them 100,000 untreated ties, likewise purchased in the South.

GOOD ROADS AND STREETS

\$60,000,000 Road Measure Passed by Both Branches of the Missouri General Assembly.

By almost unanimous approval, both branches of the General Assembly of Missouri passed the \$60,000,000 hard-surfaced road bill, the Senate adopting the measure by a vote of 28 to 9 and the House by 129 to 2. The constitutional amendment authorizing the issuance of \$60,000,000 of bonds, was ratified by the voters last November. The bill, as passed, provides for issuing \$10,000,000 of the bonds in 1923 and \$5,000,000 annually thereafter. It is planned to secure the funds for retiring the bonds from automobile fees and without a direct tax levy.

The proposed State system will be approximately 7,000 miles in length, allowing for two highways across each county. The bill provides for 1500 miles of road of concrete or other similar material of a higher type than gravel connecting the principal population centers of the State, and apportions \$6,000 a mile to each of the 114 counties, in addition to \$20,000,000, or one-third of \$60,000,000, making a total of \$29,000,000 allotted for the higher class of construction. The remaining \$31,000,000 is available for gravel roads. It is further provided that one-third of any money received from the Federal Government be applied to roads of a higher type than gravel and two-thirds to gravel roads. Upon an estimate of \$35,000,000, Federal funds would be divided approximately in the proportion of \$11,500,000 and \$23,500,000.

The Highway Commission is to consist of four members and it is expected that before the end of the year the Commission will be fully organized and an engineering department created to manage the engineering problems that may be encountered in carrying out the contemplated program.

According to a bulletin recently issued by the Missouri Highway Department, there are now 752 miles of highway being constructed under the supervision of the Department, the total cost amounting to \$11,119,585, about one-half of this sum being Federal aid. The major portion of the work is nearing completion.

The 752 miles of highway, either completed or in course of construction, are divided as follows: Gravel, macadam and chatts, 386 miles; cement concrete, 124 miles; asphaltic concrete, 3 miles; bituminous macadam, 61.5 miles; brick, 3.5 miles; graded earth, 174 miles.

Over 100 Miles of State Highway in Georgia District.

According to R. T. Goodwyn, State Highway Department engineer for the Eighth District of Georgia, the construction of a total of 116.7 miles of road has been supervised by the State Highway Department in that district, and of this construction, 95.6 miles have been taken over for maintenance.

Five roads, totaling 19.2 miles, are of concrete, four roads or 8.2 miles, are of bituminous, macadam, and the balance, 89.3 miles, are of top soil. Clarke County secured 7.6 miles of the total mileage, including the Mitchell's Bridge road, 3.8 miles in length, constructed of bituminous macadam, the maintenance of which has been taken over by the highway department.

Notes on Good Road Construction.

Approximately \$1,000,000 will be available for expenditures on highway construction in Letcher County, Ky., within the next year, including a \$300,000 county bond issue, State aid, and funds contributed through the fiscal court. The main highway is the Whitesburg to Hindman road, 5 miles of which

is now under construction up Sandlick Creek toward Hindman, the county seat of Knott County.

Three contracts totaling \$447,000 have been awarded by the Virginia State Highway Commission for road construction as follows: H. H. George at \$300,000 to construct a concrete road from Charlottesville to Heath, Albemarle County; Porter and Peck at \$46,000 to improve 7½ miles of dirt road from the Henry County line to Sydnorsville, Franklin County; C. S. Luck at \$101,000 to pave 3½ miles of road in Albemarle County. The contractors are all of Richmond, Va.

\$450,000 Contracts Awarded for Highway Improvements in Two Texas Counties.

Several contracts involving a total expenditure of approximately \$450,000 have been awarded for highway improvements in Cameron and Bee Counties, Texas. The road work in Cameron County will consist of grading and surfacing with gravel 22 miles of highway in Buckholts-Milano Road District No. 8, and the contract was awarded to Rice & Winder of Austin, Tex., at \$60,029. A contract for concrete and wooden drainage structures in that county was let to J. R. Barmore of Cameron, Tex., at \$16,046.

Smith Bros. of Crockett, Tex., received the contract at \$191,743.92 for building 8.5 miles of Highway No. 9 in Bee County from Karnes County, south, the surfacing to be of caliche and gravel, 18 feet wide, and 1-inch bituminous topping, involving 79,996.4 square yards. This company was also awarded a contract at \$187,865 to construct 10.5 miles of 18-foot gravel road with 1-inch bituminous topping, involving 98,856 square yards, on Highway No. 9 in Bee County from San Patricio County, north.

Students Learn Cotton Manufacturing in North Carolina Textile School—Attendance Heavy.

Raleigh, N. C., August 6.—(Special)—The Textile Department at the State College of Agriculture and Engineering, last term had a larger registration than any year previously, with 166 students registered, 155 in regular courses and 11 rehabilitation students. It also had the largest graduating class, 18, all whom have been located in different positions in mills and allied work. For two years experts of the United States Government, through the Office of Markets, have been using the machinery in the school to make experiments with different grades of cotton, the results of which will be valuable to mill men.

For twelve years the National Association of Cotton Manufacturers has awarded the students' medal to this textile school, and it is the only school in the South to receive the medal this year. It is one of the best equipped textile schools in the country for instruction in cotton manufacturing, having a complete equipment for instruction from the bale to the finished product. Much new machinery has been installed. Graduates of this school are filling responsible positions in cotton mills, commission houses and other allied industries. It is expected that over 200 men will take this line of work at the next term, which begins in September. A number of the students attend this school all the year except two weeks in August. The leading mills are sending picked men as students. The Marshall Field mills at Spray had all the senior class as guests, paying all expenses.

During the Interstate Farm Congress to be held in New Orleans from September 12 to 18, there will be a specially called meeting of the Louisiana and Mississippi divisions of the American Cotton Association.

LUMBER AND BUILDING MATERIALS

Southern Pine Lumber Holds Up Well.

New Orleans, La., August 2—[Special]—Sales of lumber at mills of the Southern Pine Association are holding up fairly well. For the weeks ended July 8 and 15 sales were 2,541 cars containing 55,172, 733 and 2,810 cars containing 60,639,800 feet, respectively. Production reported by 134 mills for the week ended July 8 was 60,484,251 feet, while for the week ended July 15 the total production of 132 mills amounted to 65,527,979 feet.

The summary reports for the two weeks are as follows:

WEEK ENDED FRIDAY, JULY 8—134 MILLS REPORTING.		
	Cars	Feet
Orders on hand beginning of week.....	9,686	210,312,118
Orders received during week.....	2,541	55,172,733
Total	12,227	265,484,851
Shipments during week.....	2,763	59,993,019
Orders on hand end of week.....	9,464	205,491,832
WEEK ENDED FRIDAY, JULY 15—132 MILLS REPORTING.		
	Cars	Feet
Orders on hand beginning of week.....	9,356	201,902,480
Orders received during week.....	2,810	60,639,800
Total	12,166	262,542,280
Shipments during week.....	3,092	66,725,360
Orders on hand end of week.....	9,074	195,816,920

Plans for Reducing Time and Cost of Air Seasoning Wood.

In cooperation with the sawmills and wood utilization plants throughout the country, the Forest Products Laboratory, of Madison, Wisconsin, is organizing an extensive field study on the air seasoning of wood. The Laboratory furnishes the following facts about the investigation: Its purpose is to determine the piling practice which will result in the fastest drying rates consistent with the least depreciation of stock, the least amount of required yard space, and the least handling costs. The study will be carried on concurrently on both hardwood and softwoods. All the important commercial woods of the United States will eventually receive consideration.

The air seasoning of wood is an old practice says the Laboratory. No systematic attempt has ever been made, however, to work out the exact conditions under which drying time and drying costs can be reduced to a minimum. It is not actually known which of the numberless methods of piling will give the quickest and the cheapest results under given climatic conditions. The new project will furnish a comparison of the effects of such piling variables as sticker heights, the spacings of boards in layers, the heights of pile foundations, and the directions of piling with relation to prevailing winds and yard alleyways.

The study is expected to decide whether from a business standpoint lumber should be dried partly at the mill and partly at the plant of utilization, or whether it should be completely dried at the mill. The data collected will also go a long way toward showing whether air seasoning or kiln drying is the more profitable.

A tentative working plan of the air seasoning study has been prepared by the Forest Products Laboratory, and copies are being sent to the secretaries of the various lumber and wood-using associations, state foresters, forest school heads, and others eminently qualified to comment on the plan. As yet the plants at which the work will actually be done have not been definitely chosen, but the interest already manifested indicates that there will be no difficulty in securing cooperation with plants ideal for the study. Actual field work will soon be well under way.

Comprehensive Treatise on Naval Stores.

"Naval Stores: History, Production, Distribution and Consumption" is the name of a large book of nearly 300 pages, compiled by Thomas Gamble, editor of the Weekly Naval Stores Review, Savannah, Ga., and published by the Review Publishing and Printing Company of that city. The volume is profusely illustrated and contains many special articles concerning the naval stores industry and trade in this and other countries, all being of much interest and value. The compiler has displayed excellent judgment in the arrangement of its contents, prefacing them with a historical narrative which shows that Sir Walter Raleigh, more than 300 years ago, was advised as to the diversity and extent of the pine forests of North Carolina and the gathering of naval stores was begun soon thereafter. Several other articles of Mr. Gamble follow, all of them containing an abundance of useful information, besides numerous other contributions by different authorities. The book is printed in excellent type on heavy paper and the pictures are well executed. The price of the volume delivered is \$3.25.

Baltimore Building Operations Total Nearly \$2,000,000.

Building activities in Baltimore during last month involve the expenditure of \$1,957,200. In the city proper permits totaling \$1,162,560 were issued, while in the new Annex permits amounted to \$794,640. In the city proper new improvements included: 139 garages, \$81,100; 79 two-story brick dwellings, \$271,000; 22 two-story frame dwellings, \$106,000. In the annex the following new improvements were authorized: 35 garages, \$17,200; 72 two-story frame houses, \$335,000; 37 two-story brick dwellings, \$156,000; one story.

Heavy Shipments of Textile Machinery from England to France and the Orient.

Manchester, July 16 [Special]—Lancashire makers of textile machinery continue to experience a keen demand for their products, chiefly from firms in India, although buyers in France and Japan have placed extensive contracts as well. The official statistics of exports of textile machinery from the United Kingdom clearly show the state of trade. For the first half of 1913 the shipments amounted to 88,082 tons and the figure for the first six months of this year is 79,282 tons, equal to 90 per cent. of the 1913 half-yearly total. The exports of cotton yarns and piece goods for the first half of this year, so far as quantities are concerned, are only about 48 per cent. and 34 per cent., respectively, of the totals for the first half of 1913.

South American Markets Go to Germany.

New Orleans, La., August 6—[Special].—Because of the lower cost of labor in Germany than the United States, German manufacturers can undersell the American easily in South American markets in all lines except those which naturally originate in this country, according to R. Keifer, of Keifer & Helmke of Hamburg, German agents for W. R. Grace & Company, here on business trip.

"Already in South America," he said, "German steel products are on the market 30 to 50 per cent lower than the identical goods made in the United States are listed at. Germany is buying only for her actual needs, and selling as cheap as possible."

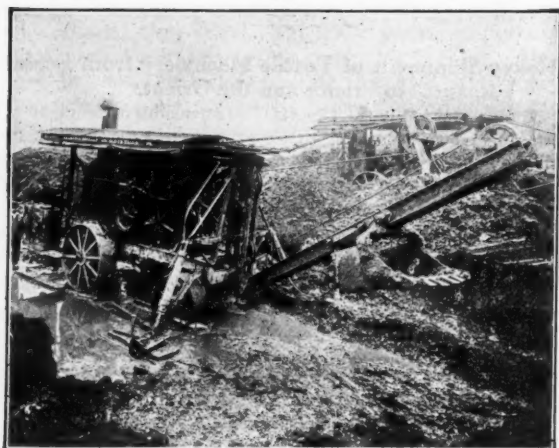
MECHANICAL

An Excavator for Road or Ditching Work.

A new 14-ton all-steel traction excavator possessing a number of improved features has been placed on the market by the Keystone Driller Co., Beaver Falls, Pa. It is claimed for this new machine, with its half circle swing, that it can be operated alongside of a row of buildings or trees, or a street car track without interference of any kind, as the body of the machine does not swing. There are two speeds for traction, viz.: 1 and 3 miles an hour and the machine will make runs of ten to fifteen miles in ten hours. Moves of from 20 to 30 miles have been made in two or three days.

This excavator is equipped with a two cylinder 6 x 6 engine developing 32 horsepower and giving a 4,000 pounds thrust to the skimmer scoop when digging hard materials. The boom is 18 feet long, providing horizontal crowd for a skimmer of 14 feet. The equipment includes hydraulic side jacks operated by a pump controlled by a six-way valve at the operator's hand; they are raised and lowered by throwing the valve lever. The tread wheels are 55 inches in diameter with 18-inch wrought steel tires and they are equipped with chain cleats which can be conveniently removed or replaced as desired, it having been found that these chain cleats afford much greater traction than any others the company has ever used. Front wheels are 36 inches in diameter, with 16-inch wrought steel tires having bolted removable cutter bands. The wheel base is 9 feet 6 inches. The boiler is 40 by 72 inches, of vertical fire tube type and it is so placed that a much better distribution of weight is obtained.

The new flat bail skimmer scoop is mounted on the boom upon six trolleys and the improved bail gives actually three-fifths to five-eighths cubic yard capacity, so



THE EXCAVATOR IN OPERATION

that the scoop will fill a 1½ yard wagon at two shots. The teeth are of manganese steel and the body of the scoop is of rolled plate of ample strength for hard work. The bottom is hinged in front and the scoop is self-cleaning; it is used in all excavation work up to 10 or 12 feet deep, but if deeper than 7 or 8 feet two cuts are an advantage.

The illustration shows the machine used for road excavating. The new drop bottom ditcher scoop is hinged the same as the skimmer, but it is operated toward the ma-

chine in digging, so that the machine stands on the solid ground. The depth capacity of the ditcher is about 20 feet. Changes from one scoop to another are speedily and easily made. The ditcher scoops range in width from 14 to 36 inches and overcut their width about 4 inches, but by swinging the boom off center, ditches up to 20 or 25 feet wide can be cut. The 24-inch scoop is of about half a yard capacity. Either scoop may be used for back filling.

The unusual portability of this outfit, it is stated, makes it appeal to a contractor having separate jobs which he desires to work with the same machine.

Automobile Directory.

The Automobile Trade Directory, a volume of 1,170 pages, well printed and substantially bound in red cloth, is a condensed catalog and classified trade directory of American automotive industries and includes a directory of national trade associations, tables, a variety of other data and related information. It is issued quarterly by the Automobile Trade Directory, Inc., Robert Wolfers, president, 243-249 West 39th St., New York, and it is copyrighted. The book is a valuable source of information not only for those directly interested in automobile business, or for manufacturers and dealers in accessories thereto, but it is also handy for motorists. The general contents are alphabetically arranged and presented but there is an index to the tables and other data. The price of the volume is \$5 per copy; the annual subscription is \$10.

A Model Oil Field Camp.

Breckenridge, Tex., August 4—[Special].—The Prairie Oil and Gas Company has just completed an oil field camp near here that is said to be the largest and best equipped in the country. The cost of the improvements, which include an ornamental iron fence around the 20 acres of land which the field occupies, is estimated at \$500,000. The plot is carefully laid out, with walks, drives, trees and flower beds, and is provided with a complete water, sewerage, heating and lighting system for all buildings on the property. Hundreds of thousands of dollars worth of drilling equipment is stored in the great warehouse, which is 40 feet wide by 300 feet long.

Fine Passenger Station Opened.

The new passenger station of the Missouri Pacific Railway at Little Rock, Ark., estimated to have cost \$1,250,000, and built by the Stewart Construction Co. of St. Louis, has been opened. It replaced the station which burned about 16 months ago. The first floor is larger than the old station and is fully equipped with up to date facilities for the convenience and comfort of the passengers; the second floor is divided into offices for the general superintendent and other officials of the railroad.

Change of Operation.

"Incorporation of the Arkansas Central Railroad into the Missouri Pacific System was announced by W. E. Brooks, general superintendent of the Missouri Pacific Railroad," says a report from Fort Smith, Ark. The change took place August 1. The Arkansas Central Railroad is 46 miles long between Fort Smith and Paris, Ark., and it is stated that new equipment and improved service will be provided.

Faster Trains to the South.

Faster trains will run between New York, Washington and the South on and after August 14 when the Southern Railway will put new schedules into effect affecting eight through passenger trains. Saving of from one hour to two hours and twenty minutes will be made on most of the runs.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ark., Arkadelphia—Clark County let contract to Township Construction Co., St. Louis, Mo., at \$74,700 to build 10 steel bridges on Arkadelphia-Gurdon and Okolona highways in Road Dist. No. 1; W. E. Barkman, Secy. Comms. (Lately noted inviting bids.)

Ark., Dardanelle—Yell County, will construct suspension bridge across Bayou at Smiley's crossing; reinforced concrete towers; bids opened Aug. 15; T. E. Wilson, County Judge and Ex-Officio Bridge Commr. (See Machinery Wanted—Bridge Construction.)

Fla., River Junction—State Road Dept. Tallahassee, Fla. let contract for approaches to Apalachicola river bridge as follows: A. Bentley & Sons Co., at \$70,000 for concrete work on east approach; W. T. Hadlow, at \$90,000 for work on west approach, timber and concrete. (Lately noted inviting bids.)

Ga., Atlanta—C. M. Holland, Purchasing Agt., 507 Courthouse, will open bids Aug. 6 to construct reinforced concrete floored I beam bridge over Poole's Creek on Jonesboro road.

Ga., Dalton—Whitfield County let contract to Nashville Bridge Co., Nashville, Tenn. at \$11,773 to build 4 reinforced concrete bridges; H. J. Wood, Clk. Comms. Roads and Revenues. (Lately noted inviting bids.)

Ga., Dawson—Terrell County will build 250-ft. concrete and steel bridge on Dawson-Cuthbert road; Federal Aid Project 208; bids opened Aug. 2. Address Comms. Roads and Revenues.

Ga., Jeffersonville—Twiggs County will build reinforced concrete bridge and reinforced concrete culvert near Dry Branch on Macon-Jeffersonville road; 15,756 lbs. steel; bids until Aug. 12; E. N. Parker, Engr., Dublin, Ga. Ky., Paintsville—Johnson County will build bridge over big Sandy river; sold bonds; G. Gauzier, Engr.

Ky., Burkesville—State Highway Dept., Frankfort, Ky., let contract to Kentucky Bridge Co., Louisville, Ky., and Vincennes Bridge Co., Vincennes, Ind., at \$30,000 to construct steel bridge in Cumberland County.

Ky., Dixon—Webster and Crittenden Counties will invite bids for steel superstructure for inter-county bridge over Tradewater river; Address A. L. Hall, Judge. (See Machinery Wanted—Bridge Construction.)

Ky., Frankfort—City and Franklin County will build St. Clair St. bridge; plan voting in November on \$350,000 bonds. Address the Mayor and Franklin County Comms., Frankfort.

Ky., Glasgow—State Highway Dept., Frankfort, Ky., let contract to Kentucky Bridge Co., Louisville, Ky., and Vincennes Bridge

Co., Vincennes, Ind., at \$20,000 to construct steel bridge in Barren County.

Ky., Pikeville—Pike County let contract to Concrete Steel Bridge Co., Clarksburg, W. Va., to build three span open spandrel reinforced concrete arch bridge across Russel Fork of Big Sandy river; 465 ft. long; Frank L. Haynes, County Road Engr., Pikeville. (Lately noted inviting bids.)

Ky., Richmond—State Highway Dept., Frankfort, Ky., let contract to Moyenhans & Forbes at \$24,900 to construct 3 concrete bridges in Madison County. (Bids lately noted.)

Ky., Winchester—State Highway Dept., Frankfort, Ky., let contract to Moyenhans & Forbes at \$4,400 to construct 3 concrete bridges in Clark County. (Bids lately noted.)

Md., Annapolis—Washington, Baltimore & Annapolis Electric R. R. Co., Geo. T. Bishop, Prest., Baltimore, let contract to Empire Engineering Co., 216 E. Lexington St., Baltimore, to reconstruct bridge over Severn river.

Md., Upper Marlboro—Prince Georges County receives bids Aug. 9 to build cement bridges in Queen Ann and Mellwood Dists. Address County Comms.

Mo., Boonville—State Highway Dept., Jefferson City, Mo., will build 16-ft. reinforced concrete slab span, 2 reinforced concrete abutments on State road from Boonville to Sedalia; \$2,317.50; State Aid Project S 20.76; H. D. Griffith, Div. Engr., DeSoto, Mo.

Mo., Keytesville—State Highway Dept., Jefferson City, Mo., will build 20-ft. reinforced concrete slab span bridge, 2 reinforced concrete abutments on State road from Marcelline to Keytesville; \$3,266.50; 16-ft. reinforced concrete slab span, 2 reinforced concrete abutments on State road from Marcelline to Keytesville; both Chariton County, State Aid Projects S 20.59; \$2,912.20; H. K. Hanick, Div. Engr., Howe Bldg., Macon, Mo.

N. C., Elkin—City will build reinforced concrete bridge 200 ft. long with 18-ft. roadway and sidewalks over Elkin Creek; bids opened Aug. 10; J. W. Ring, Mayor. (See Machinery Wanted—Bridge Construction.)

N. C., Wadesboro—State Highway Comsn., Raleigh, N. C., will build 200 ft. steel bridge over Rocky river between Stanly and Anson counties; C. M. Upton, State Highway Engr., Raleigh.

Okla., Chandler—Lincoln County will build bridges across 18 drainage ditches; \$250,000. Address County Comms.

Okla., Sapulpa—Creek County will build bridges. Address County Comms.

S. C., Gaffney—Cherokee County will construct and reconstruct 625 ft. steel bridge across Big Thicket Creek; 401,600 lbs. structural steel; bids until Aug. 18; T. J. Hester,

County Engr. (See Machinery Wanted—Bridge Construction.)

S. C., Greenwood—Greenwood Highway Commission will build concrete bridge over Hard Labor Creek and pave Orphanage Hill; low bidder Greenville Tile Co., Greenville, S. C. at \$10,226.21.

S. C., Saint George—State Highway Comsn. will probably let contract to Smoak & Reed, to build bridge at Four Holes Swamp; reinforced concrete; \$25,000. (Lately noted inviting bids.)

Tex., Bonham—City, Lee M. Myers, Mayor receives bids Aug. 10 to build bridge over Powder Creek; concrete; \$5,000; E. Whedbee, Engr. Lately noted. (See Machinery Wanted—Bridge Construction.)

Tex., Highland Park (P. O. Dallas)—City will repair bridges and construct roads; voted \$100,000 bonds; M. Costello, Member City Council. (Lately noted to vote.)

Tex., Strawn—Palo Pinto County will build steel and reinforced concrete bridge over Palo Pinto Creek; 125-ft. steel through truss span; 2 reinforced concrete piers, 35 ft. high; 2 reinforced concrete abutments, 25 ft. high; etc.; bids until Aug. 11; E. L. Pitts, County Judge, Palo Pinto, Tex. Lately noted. (See Machinery Wanted—Bridge Construction.)

Tex., Wharton—Wharton County let contract to P. G. Burns, San Bernard, Tex., at \$19,008.63 for building Kendleton bridge across San Bernard river.

Va., Richmond—City, Geo. W. Ainslee, Mayor, let contract to Claiborne & Taylor, to build concrete, steel bridge on Hull St.

W. Va., Clarksburg—Harrison County let contract to M. J. Fahey to construct bridges and road; G. L. Coyle, Engr.

W. Va., Franklin—Pendleton County let contract to W. S. Dunkle, Circleville, W. Va., to build bridge approaches.

W. Va., Kingwood—Preston County will repair and build bridges; bids opened Aug. 9; W. M. Lynn, Engr. Address P. F. King.

W. Va., Spencer—Roane County will build bridge over Spring Creek; bids opened Aug. 8; Roy L. McCully, Clk.

Canning and Packing Plants.

Fla., Haskell—Lakeland Highland Citrus Growers Assn. reported to erect packing house of 3 car unit design; install mch.

Fla., Lake Wales—Lake Wales Packing Co., capital \$25,000, organized with P. Parker, Prest.; H. C. Wiggins, Secy., both Orlando, Fla., will erect 80x100 ft. building.

Mo., Springfield—Welsh Packing Co., let contract to J. M. Olson, to erect 3 story 160 x 120 ft. packing plant; M. P. Hut & Co., Archt., 206 Falls Bldg., Memphis, Tenn.

Tex., McAllen—John H. Shary will erect curing and packing plant, capacity equal to production of 600 acres fruit.

Clayworking Plants.

Tex., Amarillo—Bricks and Tile—Panhandle Brick and Tile Co., capital \$80,000, incptd. by A. S. Stinnett, W. C. Pope, H. B. Boyle.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Coal Mines and Coke Ovens.

Ky., Chavies—Caldwell-Grimes Co., J. G. Caldwell Mgr., Hazard, Ky., will develop coal lands.

Ky., Frankford—Colwell-Blythe Coal Co., inceptd. by S. C. Colwell, M. H. Blythe and J. W. Craft.

Ky., Harlan—Crummies Creek Coal Co., capital \$50,000, inceptd. by Joseph S. Laurent, Frank M. Drake and M. S. Howard.

Ky., Lexington—Commercial Coal Mining Co., 615 Fayette Bank Bldg., organized with W. H. Hoover, Prest.; J. Henry Hall, Secy.-Treas. and Mgr.; will develop 325 acres coal land; daily output 300 tons. (Lately noted.)

Ky., Pikeville—Kentucky Block Fuel Co., Charles K. Wagner, V. P., let contract for erection of \$25,000 coal tippie; daily capacity of mines 1,000 tons.

Md., Bloomington—R. J. Ross Coal Mines, capital \$100,000, inceptd. by Grant Harsbarger, Bloomington; R. J. Ross and Sheridan Evans, both Piedmont, W. Va.

Va., Richmond—J. A. Turpin and R. J. Calligan will develop coal mines.

W. Va., Fairmont—Joe Cox Coal Co., capital \$50,000, inceptd. by W. D. Reed and J. Brock Cox, both Fairmont; W. T. Hughes, Morgantown, W. Va.

W. Va., Leevale—Leevale Coal Co., D. H. Morton, Gen. Mgr., Charleston, W. Va., will improve plant, install tippie, shaker screen, etc.

W. Va., Charleston—Hartland Colliery Co., John B. Hart, Prest., increased capital from \$500,000 to \$2,000,000.

Concrete and Cement Plants.

Fla., Kelsy City—Concrete Stone Products—Kelsite Stone Products Co., H. G. Mitchell, Prest., 210 Seward Bldg., West Palm Beach, Fla., will erect 40 x 100 ft. building, \$5,000; construction by owner; install 10,000 mchy. for mfr. of blocks, bricks, roofing tile, wall tile, etc. (See Machinery Wanted—Concrete Stone Products Machinery.)

Cottonseed-Oil Mills.

Tex., Jacksonville—Jacksonville Oil Mill, capital \$60,000, inceptd. by J. F. Gilmore, J. M. Hardaway, B. N. Kimbro.

Drainage Systems.

Mo., Chillicothe—Rich Hill Drainage Dist. Commrs. let contract to John F. Merke and William Herman at \$70,000 to construct 6½ mi. ditch, reclaiming 7,000 acres; Joseph Broadus, Engr. (Lately noted to construct.)

Electric Plants.

Mo., Lutesville—C. Alexander plans to build electric light plant.

N. C., Lenoir—Caldwell Power Co., capital \$30,000, inceptd. by J. H. Beall, J. L. Nelson.

N. C., Lexington—Town will extend electric light and water systems; issue \$50,000 bonds; Paul R. Raper, Clk. Commrs.

Flour, Feed and Meal Mills.

Ga., Savannah—Savage Lynah has rice mill under construction, will equip with hulling and screening mchy.; 1,000 to 1,200 bu. 24-hr. capacity.

Mo., Louisiana—Louisiana Elevator Co., J. W. Rule, may construct elevator contemplated.

Okla., Tulsa—Farmers' Grain Co., increases capital from \$25,000 to \$75,000.

Tex., Tullia—Farmers Grain Co., increased capital from \$25,000 to \$75,000.

W. Va., Wheeling—Wheeling Milling & Grain Co., capital \$50,000, inceptd. by J. T. Kerr, Wheeling; A. W. Eick, Martins Ferry, O.

Foundry and Machine Plants.

Fla., Oldsmar—Old Heaters—Oldsmar Tractor Co., H. J. Keller, V. P. and Gen. Mgr. will erect addition and plant for mfr. of oil heaters for residences, grove and truck heater.

Md., Baltimore—Stove Castings—Greenmount Iron Mfg. Co., 833 Greenmount Ave., will erect \$12,000 plant addition; E. Laferty, Archt., 522 N. Charles St.

Tenn., Memphis—Locomotives, etc.—Standard Machine Works, W. W. Jones will enlarge plant; has plans.

Va., Lynchburg—Lawn Mowers—Southern Electro Steel Co., Joseph Keyser, Prest., increased capital \$100,000.

Gas and Oil Enterprises.

Ark., El Dorado—Refinery—Arkansas Royalty Co., Lee Miles, Prest., Little Rock, Ark. will erect casing head gasoline refinery, daily capacity 5,000 gals. (Lately noted.)

Ky., Clay City—Red River Oil Shale Co. capital \$250,000 organized with J. W. Lee, Prest.; establish oil distillation plant.

Ky., Louisville—Diamond Petroleum Co., capital \$250,000, inceptd. by A. G. Talbot, M. L. Sale, Robert T. Burke.

Ky., Williamsburg—Whitley County Oil & Gas Syndicate, capital \$20,000, inceptd., with J. M. Langton, Sol. L. Smith.

La., Shreveport—Goff Oil Co., capital \$50,000, inceptd. with Frank P. Goff, Prest.; W. T. Calhoun, Secy.-Treas.

Okla., Ardmore—Beaugard Oil Co., capital \$100,000, inceptd. by M. M. Wasson, F. L. Lane, both Ardmore; L. Paul Tullos, Braumont, Tex.

Okla., Granite—City granted franchise to A. M. Spears and associates to lay gas mains.

Tenn., Chattanooga—Cumberland Oil Co., capital \$40,000, inceptd. by J. W. Lowman, E. B. Clark.

Tex., Benavides—Refining—Humble Oil & Refining Co., Corpus Christi, Tex., may establish refinery.

Tex., Mart—Central Texas Oil Co., capital \$85,000, inceptd. by L. B. and Earl B. Smyth, J. K. Gilliam.

Tex., Mexia—Refining—O. H. Foster, Breckenridge, Tex. and associates will erect \$400,000 oil refinery.

Tex., Mexia—Houston Oil Co., purchased \$100,000 leases, will develop.

Tex., North Mexia—Refinery—O. H. Foster and associates purchased 50 acre site; will erect \$400,000 oil refinery.

Tex., San Antonio—Somerset Pipe Line Co., 1018 Central Trust Bldg., has 4 mi. 2½-in. pipe line, and plant in operation; daily capacity 3,000 bbls. (Lately noted inceptd., capital \$10,000.)

Tex., Temple—Little River Oil Co., capital \$37,500, inceptd. by B. N. Jarrell, Eppner Cohen.

Tex., Texas City—Swiftsure Petroleum Co., Mills Bennett, Prest., Houston, Tex. purchased docks, warehouses, oil storage tanks, etc. of France and Canada Oil Transport Co., Aransas City, also acquiring oil storage and shipping facilities of Bennett Petroleum Co., Texas City, will increase shipping facilities, plans additional storage and pipe line to docks, etc. also construct topping plant.

Va., Roanoke—Roanoke El Dorado Oil Corp. capital \$100,000, chartered with E. K. Spiller, Prest. A. D. W. Dalton, Secy.

W. Va., Spencer—Ryan Oil Co., capital \$50,000, inceptd. by Thomas P. Ryan, Spencer; Charles E. and William E. Hogg, Ft. Pleasant, W. Va.

Hydro-Electric Plants

Ala., Morgan County—Ernest Lynn, Hartsells, Ala., will construct dam on Big Four Ranch; \$100,000.

Irrigation Systems.

N. C., Winston-Salem—H. G. Chatham will install irrigation plant under direction of government.

Ice and Cold-Storage Plants.

Ark., Green Forest—Green Forest Co-operative Creamery Co. will install 10 ton capacity ice plant.

Fla., Lakeland—Federal Ice Co. will erect ice plant.

Ga., Atlanta—Atlantic Ice & Coal Corp. will expend \$500,000 on plant improvements, enlarge and convert from steam to electrically operated; double output.

Ga., Decatur—Atlantic Ice & Coal Corp., Atlanta, Ga., will expend \$100,000 on plant, enlarge manufacturing facilities.

Ga., Fort Valley—Atlantic Ice & Coal Corp., Atlanta, Ga., will expend \$100,000 on plant improvements; increase capacity.

S. C., Clover—Clover Cotton Oil & Ginning Co., will erect ice plant; has plans.

Tenn., Chattanooga—Chattanooga Warehouse & Cold Storage Co., Theo. King, 212 King St., will erect 2 to 4 story addition to plant; Bouchard & Co., Engr., Nashville, Tenn.

Tex., Dallas—Lincoln Ice & Cold Storage Co., capital \$50,000, inceptd. by J. A. and B. H. Lincoln, C. L. Crenshaw.

Lumber Manufacturing.

La., Alexandria—Creston Lumber Co., capital \$150,000, inceptd. with J. M. Peel, Prest.; Carlyle Davidson, V. P. and Secy.

Va., Roanoke—Harris Hardwood Co., Allen Harris, Prest., increased capital from \$50,000 to \$500,000.

Metal-Working Plants.

Tenn., Nashville—Steel Toys—Skate Mobile Co., capital \$100,000, inceptd. by J. A. Yowell, J. C. Satterfield, R. L. Lewis.

Mining.

Ga., Elbert County—Granite Quarry—State Highway Dept., Atlanta, Ga., purchased granite quarry, annual output 250,000 tons; W. R. Neel, Engr.

Ky., Smithfield—Fluorspar and Lead—Ohio-Kentucky Fluorspar & Lead Corp. City Natl. Bank Bldg., Paducah, Ky. (lately noted inceptd., capital \$1,000,000), organized with T. J. Clay, Prest.; F. B. Moodie, V. P. and Mgr.; develop 1,000 acres, daily capacity 100 tons; have leased properties of North American Fluorspar & Lead Corp., operate and improve mines. (See Machinery Wanted—Mining Machinery.)

Tex., Austin—Sulphur—Culberson County Sulphur & Development Co., capital \$30,000, inceptd. by J. Miles Hall, H. C. Morrow and H. C. Morrow, Jr.

Tex., Ennis—Gravel—Callahan Construction Co., Dallas, Tex., will operate gravel pit containing over 2,000,000 yds. gravel; 4½ mi. spur line from Ennis to Alsodorf under construction.

In writing to parties mentioned in this department, if will be of advantage to all concerned if the Manufacturers Record is mentioned.

Miscellaneous Construction.

Ala., Mobile—Lock Gates—Major Earl North, Engr. in charge of construction work on Warrior River, invites bids for building of pair of extra lock gates.

Ark., Texarkana—Levee—Board of Directors, Garland Levee Dist., Miller County will construct loop levee, containing 126,000 cu. yds. earth; bids until Aug. 12; C. S. Christian, Engr., 423 State National Bank Bldg. (See Machinery Wanted—Levee Construction.)

Ga., Atlanta—Printing—Thomas E. Rybert & Co., Frank Cundell, Secy-Treas. purchased site contemplate erecting addition to plant.

La., Chalmette—Coal Pier.—Southern Railway, J. S. Lemond, Chf. Engr., Charlotte, N. C. will rebuild burned coal tipple, hourly capacity 250 tons.

Okla., Collinsville—Swimming Pool—Chamber of Commerce interested in constructing swimming pool in municipal park.

Tex., Houston—Ferry Construction—Harris County Commrs. will construct ferry across Houston ship channel connecting Galena and Pasadena; Nicolay Shipyard Co., Harrisburg, Tex., lowest bidder.

Miscellaneous Enterprises.

Ark., Glenwood—Potato Curing—Glenwood Sweet Potato Growers Assn., R. L. Moran, Secy. will erect 2500 bu. capacity sweet potato curing house.

Fla., Orlando—Publishing—Florida National Publishing Co., capital \$100,000, inceptd. with J. H. Wendler, Prest.; W. R. O'Neal, Secy-Treas.

Fla., West Palm Beach—Construction—H. P. & W. Construction Co., capital \$50,000, inceptd. with C. E. Prevatt, Prest.; D. E. Knetchel, Secy.

Ky., Louisville—Publishing—Tide Publishing Co., capital \$30,000, inceptd. by Roscoe C. Grant, E. A. Selby, G. D. Smith.

Md., Baltimore—Electrical Supplies—Piedmont Electric Co., 204 N. Gay St., capital \$10,000, inceptd. by Stephen N. Buchanan, Paul E. Giese, George A. Harrison.

Md., Baltimore—Transportation—Baltimore, Philadelphia & Southern Transportation Corp., Pier 5, Pratt St., capital \$500,000, inceptd. by Cornelius E. Cole, Robert A. Van Voorhis and Charles Graff, Jr.

Md., Baltimore—Dairy—Western Maryland Dairy, A. E. Gardner, Prest., Linden Ave. and Dolphin St., will expend \$260,000 on erecting various buildings, fireproof construction; bids until Aug. 2 and Oct. 1; install dairy and refrigeration mch., \$250,000; daily capacity 25,000 gals. bottled milk; Jos. Evans Sperry, Archt., Calvert Bldg., Baltimore; K. W. Schantz, Equipment Engr., Buffalo, N. Y.

Miss., Wiggins—Potato Curing—Kennedy & Co., J. B. Dorsett, Prest.-Mgr., let contract to W. R. Dale to erect first unit, 32x32 ft., potato curing house; mill construction; Alexandria Potato Curing Co., Archt.

Mo., St. Louis—Laundry, etc.—Excelsior Laundry Co., B. T. Kearns, Prest., Grand and Bell Sts., let contract to Fruin-Colton Construction Co., 800 S. Spring St. to erect 2 story 119 x 127 laundry and power plant; Leonard Haeger, Archt., 384 Utah Pl.

Okla., Okemah—Potato Curing—Camp Bros. will erect potato curing house, capacity about 20,000 bu.

Okla., Tulsa—Laundry—Sand Springs Laundry, inceptd. by W. L. Nixon, James P. Gilmore, H. R. Williams.

Tex., Dallas—Undertaking—Anderson & Co., capital \$18,000, inceptd. by J. E. and M. D. Anderson, T. O. Rutledge.

Tex., Dallas—Construction—Poydas Building Co., capital \$19,500, E. V. Wickey, J. Fred Rogers, A. L. Ewing.

Tex., Dallas—Construction—Holliday Construction Co., capital \$10,000, inceptd. by F. E. McLarty, D. F. Anderson, F. P. Holliday.

Tex., Houston—Incinerators.—City contemplates constructing 2 garbage disposal plants; estimate cost \$30,000. Address the Mayor.

Va., Richmond—Publishing—Methodist Episcopal Publishing House, B. A. Whitmore, Mgr. will erect 5 story publishing house; \$200,000; Gooch-Williams Co., Norfolk, Va., lowest bidder; Carneal & Johnson, Archts., Richmond. (Lately noted.)

W. Va., Charleston—Transportation—Yellow Cab Co., capital \$10,000, inceptd. by J. H. and H. H. Mahan, L. J. Goodrich.

Miscellaneous Factories.

Ala., Tuscaloosa—Paper—E. W. Barrett, Mobile, Ala., interested in erection of paper mill; Forest Engr. Drolet making survey.

Ark., Camden—Mattresses—Arkansas Mattress & Pillow Co., organized by A. J. and W. M. Matthews, G. C. Smith.

Ga., Dalton—Bottling—Coco-Cola Bottling Works, capital \$14,000 inceptd. by J. C. Henderson, R. E. Ferrell.

Ga., Nashville—Bakery—W. Harper, Live Oak, Fla., will establish bakery.

La., Shreveport—Drugs—Fortier Drug Co., capital \$20,000, inceptd. by Leon J. Fortier, J. C. Bridges, R. E. Wilkinson.

Ky., Newport—Drugs—Mutual Drug Co., capital \$25,000 inceptd. by Chris Schott, Fred Fuchs.

Md., Westport—Cork Products—Spanish American Cork Products Co., capital \$500,000, inceptd. by Carolyn J. Denhard, Walter V. Harrison and Philip S. Ball; mfrs. cork products.

Mo., Kansas City—Lime Plant—City Fire and Water Board let contract to Charles P. Hoover, Cleveland, O., to erect alum manufacturing plant at Quindaro pumping station; approximate cost \$14,500; Charles D. Foreman, Asst. Chief Engr.

Mo., Mexico—Creamery—Hassen Bros., 110 S. Jefferson Ave., will erect creamery and ice cream mfg. plant, 2 story 70 x 90 ft. building; Ben. C. Elliot, Archt., 113 S. Jefferson Ave. (Lately noted.)

N. C., Mt. Gilead—Garments—Mt. Gilead Garment Factory, capital \$25,000, organized with C. B. Ingram, Prest.; A. S. McRae, Secy-Treas.; Fred Stanback, Mgr.; establish plant for mfrs. of men's shirts and overalls; install sewing machines, etc.; bids until Sept. 1. (See Machinery Wanted—Sewing Machines; Cutting Machines, etc.; Motors.)

Okla., Hartshorne—Bottling—Hartshorne Bottling Works, capital \$10,000, inceptd. by J. D. Plumket, E. B. and Sam Perry.

Okla., Lawton—Paints—A. L. Lund will establish paint mfg. plant, daily capacity 1,000 gals.; mch. purchased.

S. C., Charleston—Bakery—Modern Baking Co., inceptd. with M. H. Sisson, Prest.-Treas.; J. W. Sisson, V. P. and Secy.

S. C., Hartsville—Bakery—F. D. Slaght will establish electric bakery; let contract for equipment.

S. C., Monck's Corner—Beverages—Parfay

Bottling Works, capital \$20,000, inceptd. with S. Behrman, Prest.; Morgan Howells, Gen. Mgr.; establish plant for mfrs. of various soft drinks; daily capacity 200 cases.

S. C., Rock Hill—Bagging, etc.—Enterprise Mfg. Co., capital \$25,000, inceptd. with T. L. Johnston, Prest.; J. B. Creighton, Secy-Treas.

Tex., Dallas—Solution—International Cotton Protecting Co., capital \$25,000, inceptd. by Chas. J. Hinckley, Dallas; S. Van De Mark and Edgar G. Macley, both Houston, Tex.; mfrs. cotton protecting solution or paste.

Tex., San Antonio—Drugs—H. L. Wagner Drug Co., increases capital from \$60,000 to \$80,000.

Tex., San Antonio—Drugs—H. L. Wagner Drug Co., increased capital from \$80,000 to \$80,000.

Va., Lynchburg—Creamery—A. E. Chamberlain, Chamber of Commerce, interested in establishing creamery.

W. Va., Bluefield—Bottling—Bluefield Bottling Co., Mr. Mitchell, let contract to M. C. Rynne, Roanoke, Va., to erect 2 story 70 x 100 ft. factory building; Alexander M. Rynne, Bluefield.

W. Va., Wheeling—Art Glass—Bonita Glass Co., capital \$100,000, organized with Geo. E. House, Prest.; Otto Jaeger, Secy-Treas. and Mgr.; will erect 2 buildings, 60x80 ft.

Motor Cars, Garages, Tires, Etc.

Ark., Little Rock—Garage—Little Rock Auto Tow Service Co., inceptd. by William and Fred A. Rinke, Marvis Warren.

Ark., Paragould—Battery Station—Wiley Wolfe will erect building for battery station.

D.C., Washington—Garage—Bennett's Garage, capital \$10,000, inceptd. by Archer G. Bailey, A. Eugene Bennett, Charles W. Keyes.

Fla., Eustis—Garage—Eustos Motor Co. let contract to Arnold-MacDonough Co. to erect 60x126-ft. brick garage; \$20,000; Alan J. MacDonough, Archt.

Fla., Miami—Garage—Mathews, Manley & Arthur will remodel garage building, estimated cost \$15,000; Hampton & Reimert, Archts.

Fla., Plant City—Service Station—C. A. Burdette will establish service station.

Fla., Plant City—Service and Filling Station—Boyd Auto Co. let contract to L. C. Fallin to remodel building; install service and filling station, also repair shop.

Fla., Plant City—Vulcanizing—C. U. Penney will remodel building.

Fla., Tampa—Tires—Peninsular Tire & Rubber Co., A. H. Van Auken, Gen. Mgr. will erect 2 story 100 x 300 ft. building, reinforced concrete; install 2 vulcanizers, capacity 300 tires daily; build additional 2 story, 60 ft. square office building, 60 ft. square storage building and water tower and tank; total expenditure about \$200,000. (Lately noted, inceptd., capital \$1,000,000.)

Ky., Adairville—Motors—J. A. Lyne Motor Co., capital \$15,000, inceptd. by J. A. Lyne, Adairville; J. D. Lashbrooke and M. R. Hargan, both Russellville, Ky.

Ky., Louisville—Automobiles—Louisville Automobile Dealers' Assn. increased capital from \$7,500 to \$30,000.

Miss., Jackson—Automobiles—Dixie Motor Sales Co., capital \$30,000, inceptd. by C. J. and G. W. Miller, W. G. Paxton.

Md., Baltimore—Garage—Edward J. Storck,

Munsey Bldg. will erect nine 1 story brick garages; total dimensions 92 x 20 ft.

Md., Baltimore—Sales and Service Station—Jos. J. Greenberg let contract to John Waters Building Co., 23 E. Center St., to erect 2 story 33 x 85 ft. building; LeRoy R. Rothchild, Archt., 1225 Sansom St., Philadelphia, Pa.

Mo., Clarence—Repairing—A. Burnett, care of Clarence Auto Co., contemplates erecting 1-story brick and steel repair shop.

Md., Salisbury—Garage—J. Corder Mellott will erect garage.

Mo., Kansas City—Garage—Midland Realty Co., Reliance Bldg., will remodel and erect 1-story 45x160 ft. addition; construction by day work; Hoyt, Price & Barnes, Archts., 607 Reliance Bldg., in charge.

N. C., Charlotte—Motors—Rust Motor Co., capital \$100,000 inceptd. by J. S. Rust, W. M. Crosby and J. M. Samonds.

Okla., Miami—Garage—F. Statton contemplates erecting 2-story brick garage.

S. C., Columbia—Automobiles—Morris Motor Co., capital \$50,000, inceptd. by W. L. Morris and B. W. Whitton.

S. C., Columbia—Garage—W. J. Keenan will erect garage and filling station.

Tenn., Jasper—Garage—W. S. Price let contract to W. A. Price to erect 1 story and basement 60 x 100 ft. public garage.

Tenn., Mt. Pleasant—Garage—Fry Bros., W. C. Barfield, Supt., leased building; remodel and equip for garage.

Tenn., Nashville—Tires, etc.—Roney Tire & Auto Co., capital \$10,000, inceptd. O. B. Roney, Carl and Ernest W. Benz.

Tex., Dallas—Automobiles—North Texas Nash Co., capital \$30,000, inceptd. by F. E. McLarty, W. E. Brown, M. D. Anderson.

Tex., Dallas—Garage—R. L. Spann will erect 3-story brick and steel building for polishing automobiles, \$85,000.

Tex., McAllen—Automobiles—Rio Grande Automotive Co., capital \$25,000, inceptd. by L. H. Daniel, J. E. Rogers, R. E. Doss.

Tex., Mexia—Garage—Jack Womack and C. King will erect brick garage, \$30,000; purchased 75x115 ft. site.

Tex., Perryton—Motors—Hobbs Motor Co., capital \$24,000, inceptd. by L. S. Hobbs, W. B. Lemaster, D. E. Woodward.

Tex., Sterling City—Motors—Sterling Motor Co., capital \$20,000, inceptd. by Wm. Schneemann, Jr., Fred Schmidt, Oscar Ruffini.

Va., Bristol—Garage—A. Jay Sheldon & Co., Prest., increased capital from \$15,000 to \$25,000.

Va., Hamilton—Garage—Gregg-Compher Motor Co. will construct concrete and steel garage.

Va., Norfolk—Garage—Cayton & Weiskopf, capital \$15,000, inceptd. by Pemberton Franc, Prest.; M. Y. Cayton, Secy.

Va., Richmond—Automobiles—Advance Realty Corp., Archer G. Jones, Secy.-Treas., let contract to E. H. Armentrout to erect 99x100 ft. fireproof building, wood and slag roof; \$32,000; H. A. Castor, Archt., Philadelphia, Pa.

W. Va., Beckley—Automobile Supplies—T. K. Laing and Jeff Harper purchased site to erect automobile supply house.

W. Va., Henry—Automobile Supplies—Elk Motor & Supply Co., capital \$25,000, inceptd. by W. S. Pierson, W. L. Shelton, J. A. Jones, all Clay, W. Va.

W. Va., Matoka—Motors—Willis Motor Co., capital \$100,000, inceptd. by J. F. Willis, J. S. Hall, C. M. Rudder, all Bluefield, W. Va.

Railway Shops, Terminals,

Ky., Hazard—Louisville & Nashville R. R., W. H. Courtney, Ch. Engr. Louisville, Ky. let contract to Jos. E. Nelson Co., 3240 S. Michigan Ave., Chicago, Ill. to construct roundhouse and station.

Road and Street Construction.

Ala., Birmingham—Jefferson County will resurface and repair south highway including resurfacing and repairing bitulthic, brick and asphalt streets; bids until Aug. 26; C. J. Rogers, County Highway Engr. (See Machinery Wanted—Paving.)

Ala., Birmingham—City let paving contract as follows: H. N. Bowdry, at \$10,114 to improve 31st St.; Milton & Erickson, at \$3,089.50 to improve Fifth Place; H. P. Burruss, Commr. Public Improvements.

Ala., Fairfield—City will improve streets; A. Clinton Decker, Mayor.

Ala., Livingston—Sumter County sold \$75,000 bonds for road and bridge construction. Address County Commrs.

Ala., Selma—City will pave portion of Broad St.; brick, asphalt, asphaltic concrete, bitulthic or concrete; bids until August 29; W. O. Crisman, City Engr. (See Machinery Wanted—Paving.)

Ala., Tuscaloosa—State Highway Comsn., Montgomery, Ala., let contract to Thompson & Donoho, Birmingham, Ala., at \$223,000 to construct 25.2 mi. Byler road; Tuscaloosa County; W. S. Keller, State Highway Engr., Montgomery. (Lately noted inviting bids.)

Ga., Columbus—City, J. L. Couch, Mayor, let contract to Campbell Construction Co., to pave underpass.

Ga., LaGrange—Troop County will construct 6.61 mi. top-soil road on State Route No. 1 known as LaGrange-Chipley road; State Aid Project S 4-6; bids until Aug. 23; J. H. Hardy, Chrmn. Commrs. Roads and Revenues. (See Machinery Wanted—Road Construction.)

Ky., Edmonton—State Highway Dept., Frankfort, Ky., let contract to Vincennes Bridge Co., Vincennes, Ind., at \$22,000 to construct steel bridge in Metcalfe County.

Ky., Sanford—State Highway Dept., Frankfort, Ky., let contract to William Lutes & Co., Lexington, Ky., at \$105,000 to construct 6.2 mi. waterbound macadam road. Bids lately noted.)

Ky., Scottsville—State Highway Dept., Frankfort, Ky., let contract to Speed Parker Co., Louisville, Ky., at \$55,000 for 1½ mi. city improvements. (Bids lately noted.)

La., Benton—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La., will construct 3.05 mi. Bossier City-Coushatta highway, Bossier Parish; bids opened Aug. 8; Duncan Buie, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

La., Leesville—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La., will construct 5 mi. Leesville-Many highway; 5 mi. Leesville-Alexandria, 5 mi. Leesville-DeRidder and 5 mi. Leesville-Texas highways; Vernon Parish; bids opened Aug. 8; Duncan Buie, State Highway Engr., New Orleans, La. (See Machinery Wanted—Road Construction.)

La., New Orleans—City plans to pave 17 and repave 8 streets; granite blocks, creosoted wood block, bituminous concrete and other material; A. Klorer, City Engr.

La., Ruston—Lincoln Parish will sell \$700,000 bonds for road construction; S. J. Heard, Prest. Police Jury.

La., Shreveport—City, J. C. Flanagan, Secy. Treas. will pave Centenary boulevard from Kings highway to Washington Ave.; bids until Aug. 9. See Machinery Wanted—Paving.)

Md., Baltimore—Board of Awards will open bids August 10 to grade and pave alleys in Private Alley Contract No. 78; cement concrete; Wm. F. Broening, Prest. (See Machinery Wanted—Paving.)

Md., Baltimore—Board of Awards will receive bids Aug. 10 to grade, curb and pave streets listed in Contracts Nos. 192 OC-NA, 193 OA-OC, 194-OC, and 195-OA: 19,600 sq. yds. sheet asphalt; 3,400 sq. yds. vertical fiber vitrified block; 10,400 sq. yds. granite block repaving, etc. Wm. F. Broening, Prest. (See Machinery Wanted—Paving.)

Md., Baltimore—Paving Comsn., 214 E. Lexington St., will pave Hopkins Place with sheet asphalt; will invite bids.

Md., Towson—Baltimore County will improve section Dulaney's Valley pike with concrete, 1 1/5 mi.; improve 4 mi. Middle River road with concrete and macadam German Hill road 1,500 ft.; bids until Aug. 11; J. R. Hunt, Clk. County Commrs. (See Machinery Wanted—Road Construction.)

Miss., Ellisville—Jones County will grade Richton, Ovette and Laurel highways; bids opened Aug. 1; U. S. Collins, Clk. Supvrs. Beat 4.

Miss., Fulton—State Highway Comn., Jackson, Miss., will construct 9 mi. concrete road from Fulton westward to Lee County line, Itawaba County; bids in August.

Miss., Greenville—State Highway Dept., Jackson, Miss., will concrete surface 10 mi. road in Washington County; bids opened Aug. 9. (See Machinery Wanted—Road Construction.)

Miss., Holly Springs—State Highway Comsn., Jackson, Miss., will let contract in August for roads in Marshall County.

Miss., Indianola—State Highway Dept., Jackson, Miss., will concrete surface road in Sunflower County; bids opened Aug. 10. (See Machinery Wanted—Road Construction.)

Miss., Meridian—City will pave 24th Ave.; \$125,000; will let contract; W. H. White, City Clk.

Miss., Meridian—City will pave streets; streets; may vote on \$100,000 bonds; W. H. White, City Clk.

Miss., Pittsboro—Calhoun County will construct roads; voted \$50,000 bonds. Address County Commrs.

Miss., Poplarville—State Highway Comsn., Jackson, Miss., will let contract in August for roads in Pearl River County.

Mo., Boonville—State Highway Dept., Jefferson City, Mo., will construct 2.51 mi. State road from Bell Air northward and southward; Cooper County; State Aid Project S 20.76; \$13,344.49; H. D. Griffith, Div. Engr., DeSoto, Mo.

Mo., Delta—State Highway Comsn., Jefferson City, Mo., will construct dirt road between Delta and Arbor; will let contract; cost \$28,000.

Mo., Jefferson City—General Assembly passed bill providing for \$60,000,000 bonds for road construction; entire system will be 7,000 mi.; \$31,000,000 for gravel roads and \$29,000,000 for 1,500 mi. of roads of concrete or higher type than gravel. Address Gov. A. B. Hyde. (State was reported in November, 1920, as having voted amendment to constitution providing for \$60,000,000 bonds.)

Mo., Kansas City—Board Public Works let \$8,003.75 paving contracts as follows: Parker—Washington Co., at \$4,339.51 for

paving Baltimore Ave., between Seventh and Ninth Sts.; 1,589 sq. yds. pavement, at \$4, 604.24, for paving Ninth St., between Wyandotte and Main Sts.; 2,046 sq. yds. pavement.

Mo., Keytesville—State Highway Dept., Jefferson City, Mo., will construct 1.76 mi. State road from Keytesville northward; Chariton County; State Aid Project S 20.59; \$15,865.20; H. K. Hanick, Div. Eng., Howe Bldg., Macon, Mo.

Mo., Linn Creek—State Highway Dept., Jefferson City, Mo., let contract to Newton Construction Co., Jefferson City, Mo., to construct 2.97 mi. State road from Morgan County line southward; \$24,866; State Road Project No. 241. (Lately noted inviting bids.)

Mo., St. Charles—St. Charles County will sell \$200,000 bonds for road construction; Herbert C. Sandfort, Clk. County Court.

Mo., St. Joseph—City plans to pave 22nd St.; asphalt on concrete base; W. Dearing, Clk.

Mo., St. Louis—Board Public Service, E. R. Kinsey, Pres., let contract for alley paving to Independent Quarry & Construction Co., 3857 Ashland Ave.; S. Krainka Construction Co., 319 N. 4th St.; F. A. Stiers Construction Co., 2267 S. Kingshighway, and T. E. Cavanaugh, 6452 S. Oakland Ave.

Mo., Unionville—State Highway Dept., Jefferson City, Mo., will construct 5.44 mi. State road from Unionville westward; Putnam County, State Aid Project S 20.49; H. K. Hanick, Div. Engr., Howe Bldg., Macon, Mo.

N. C., Aurora—Town will sell \$25,000 bonds for street construction; J. T. Wilkinson, Clk.

N. C., Durham—City will construct pavements; minimum 45,000 sq. yds.; maximum 70,000 sq. yds.; bids until Aug. 30; R. W. Rigby, City Mgr. (See Machinery Wanted—Paving.)

N. C., Franklin—State Highway Comsn., Raleigh, N. C., will let contract within 30 days for construction of road from Almond to Tipton, Macon and Swain counties, Project No. 538.

N. C., Goldsboro—State Highway Comsn., Raleigh, N. C., plans to grade, drain and surface 9.9 mi. road from Goldsboro to Lenoir county line; Wayne County, State Project 616; W. M. Upham, State Highway Engr., Raleigh.

N. C., Greensboro—State Highway Comsn., Div. Office, Greensboro, N. C., plans to grade, drain and sand-clay surface 10 mi. road from children's home at High Point via Deep River to Friendship; C. O. Lowe, Engr.

N. C., Greensboro—State Highway Comsn., Raleigh, N. C., plans to grade, drain and hard-surface 11 mi. road from end Federal Aid Project 47 to Alamance county line, State Project 632, Guilford County; C. M. Upham, State Highway Engr., Raleigh.

N. C., Hayesville—State Highway Comsn., Raleigh, N. C., will let contract within 30 days for construction of road from Hayesville to Cherokee county line, Clay County, Project No. 538.

N. C., Hickory—City plans to pave 1 mi. 10th Ave. from 12th St. to city limits; Tappan & Perkins, Engrs., High Point, N. C.

N. C., Lexington—Town will construct roads; issue \$220,000 bonds; Paul R. Raper, Clk. Comms.

N. C., Lincolnton—State Highway Comsn., Raleigh, N. C., plans to grade, drain and surface 6.1 mi. road from Lincolnton to Iron Station, State Project 534, Lincoln County; also 1.8 mi. same type of road and 4.3 mi. sand-clay or top-soil road; C. M. Upham, State Highway Engr., Raleigh.

N. C., Marion—State Highway Comsn., Raleigh, N. C., will let contract within 30 days for construction of Central highway in McDowell County, Projects Nos. 571 and 572.

N. C., Marshall—State Highway Comsn., Raleigh, N. C., will let contract within 30 days for construction of road from forks of Ivey to about 2 mi. in Yancey County; Project No. 557, Madison County.

N. C., Murphy—State Highway Comsn., Raleigh, N. C., will let contract within 60 days for construction of road from Murphy to Georgia state line and connecting with highway in Georgia extending to Atlanta; Project No. 534, Cherokee County.

N. C., Robbinsville—State Highway Comsn., Raleigh, N. C., will let contract within 60 days for construction of road from Tipton to Robbinsville; Project No. 545, Graham County.

N. C., Rocky Mount—City plans to pave street. Address The Mayor.

N. C., Warrenton—State Highway Comsn., Raleigh, N. C., plans to grade, drain and surface 10 mi. road from Warrenton to point on Macon-Littleton road; Warren County, State Project 636; C. M. Upham, State Highway Engr., Raleigh.

N. C., Washington—Town plans to pave street. Address The Mayor.

N. C., Wentworth—Rockingham County sold \$300,000 bonds for road construction. Address County Comms.

N. C., Winston-Salem—State Highway Comsn., Raleigh, N. C., plans to grade, drain and hard-surface 9 mi. road from Guilford county line to Waugetown; Forsyth County, State Project 531; C. M. Upham, State Highway Engr., Raleigh.

Okla., Ada—City will pave Townsend Ave. from 12th to 20th St.; Street Improvement Dist. No. 6; concrete; bids until Aug. 18; W. B. Jones, City Clk.; Benham & Mullergren, Engrs., Firestone Bldg., Kansas City, Mo. (See Machinery Wanted—Paving.)

Okla., Alva—City will pave streets and around Normal School; will invite bids; Benham & Mullergren, Conslt. Engrs., Kansas City, Mo. (See Machinery Wanted—Paving.)

Okla., Bristow—City let contract to Tulsa firm at \$128,000 to pave 9 blocks on Main St. Address The Mayor.

Okla., Sapulpa—Creek County will construct 10 mi. road between Bristow and Sapulpa; chert; \$150,000. Address County Comms.

Okla., Sapulpa—City will invite bids on paving of Lincoln, Thompson and other streets. Address The Mayor.

S. C., Camden—State Highway Comsn., Columbia, S. C., will construct 9 mi. Camden-Bishopville road in Kershaw County; low bidder Caughman Construction Co., Columbia, S. C., at \$25,000. (Lately noted inviting bids.)

S. C., Camden—Kershaw County will construct 11 mi. Camden-Lancaster road; 20,000 yds. sand-clay surfacing; bids until Aug. 15; J. D. Gregory, County Engr. (See Machinery Wanted—Road Construction.)

S. C., Greenwood—Greenwood Highway Comsn. will pave Orphanage Hill on McCormick road and build concrete bridge; low bidder Greenville Tile Co., Greenville, S. C., at \$10,226.21.

S. C., Orangeburg—Orangeburg County let contract to J. K. Mayfield, Denmark, S. C., at \$64,294.28 to construct 19.885 mi. sand and clay road from city of Orangeburg through Bowman to Dorchester line; L. K. Sturgle, Clk. County Comms. (Lately noted inviting bids.)

S. C., Saluda—State Highway Comsn., Columbia, S. C., let contract to C. E. Teague, Aiken, S. C., at \$34,000 to construct 10 mi. roadway, Saluda County; J. S. Rogers, County Supvr. (Lately noted inviting bids.)

S. C., Walhalla—Oconee County let contract to Huffstetler & Ginn, Gastonia, N. C., to construct top-soil road from Walhalla to Highlands, S. C.; 12 mi.; J. N. Stribling, County Engr.

Tenn., Blountville—Sullivan County will sell \$45,000 bonds for road construction; W. D. Lyon, Chrmn. Road Comms., Bluff City, Tenn.

Tenn., Cleveland—City will pave Church St. between Central Ave. and Inman St., also 31st and 32nd Sts., 4,850 yds. Paving; sheet asphalt, asphaltic concrete or cement concrete; bids opened Aug. 4; L. L. Woollen, Mayor.

Tenn., Jasper—Dept. Highways, Nashville, Tenn., let contract to Turner, Crox & Maloney, Chattanooga, Tenn., to construct 11 mi. road in Marion County. (Lately noted inviting bids.)

Tenn., Maryville—Blount County will improve, grade and macadamize 22 mi. grade and 34 mi. macadam; \$250,000 available; bids until Aug. 15; D. W. Harmon, Engr.; Thos. L. Nichols, Chrmn. Good Roads Comsn. (See Machinery Wanted—Road Construction.)

Tex., Beeville—Free County let contract to Smith Bros., Crockett, Tex., at \$191,743.92 to construct 8.5 mi. Highway No. 9 from Karnes county south; surface with 18 ft. caliche and gravel and 1 in. bituminous topping; 79,996.4 sq. yds.; also at \$187,865 to construct 10.5 mi. 18 ft. gravel road on Highway No. 9; 98,856 sq. yds. 1 in. bituminous topping; A. C. Pancoast, County Engr.

Tex., Cameron—Milam County let contract to Rice & Winder, Contrs., Austin, Tex., at \$60,029 for grading and surfacing 22 mi. road in Buckholts-Milano road in Dist. No. 8; gravel; also to R. Barmore, Cameron, Tex., at \$16,046 for concrete and wooden drainage structures; W. G. Gellis, County Judge; A. F. Mitchell, County Engr. (Lately noted.)

Tex., Corpus Christi—Nueces County will surface causeway; 17,119 sq. yds. bituminous surfacing, 1 1/4 in. thickness on timber deck, and 1,478 sq. yds. bituminous macadam on shell fill; bids opened Aug. 8; O. N. Powell, County Engr. (See Machinery Wanted—Surfacing.)

Tex., Dallas—Greenwood Cemetery may improve streets; \$15,000.

Tex., Groesbeck—Limestone County will construct additional gravel and rock surfacing on Highway No. 7; 3,846.7 cu. yds. gravel and 4,798.3 cu. yds. rock surfacing; material furnished by county; bids until Aug. 8; H. F. Kirby, County Judge; Fred P. Holt, County Engr. (See Machinery Wanted—Road Construction.)

Tex., Highland Park (P. O. Dallas)—City will construct bituminous pavement and repair bridges; voted \$100,000 bonds; L. E. Myers, Engr., Tex. (Lately noted to vote.)

Tex., McKinney—Collin County let contract to O'Neil Engineering & Construction Co., Dallas, Tex., to grade 20 mi. road in Princeton, Wylie and Pike Dist.; \$52,000 available; F. W. Cawthon, Engr. (Lately noted inviting bids.)

Tex., Mexia—City let contract for paving streets; \$500,000. Address The Mayor.

Tex., Orange—Orange County Comms. let contract to Rucia Moore at \$11,875 to surface 5,600 ft. lower Orange and Beaumont road.

Tex., Quitman—Wood County will construct concrete and steel drainage structures and backfilling on 14.49 mi. Jim Hogg highway between Quitman and Winnboro; bids open-

ed Aug. 9; F. Cathey, County Judge, Quitman; John E. Blair, Engr., Mineola, Tex. (See Machinery Wanted—Road Construction.)

Tex., Ulvade—City will scarify, reshape and roll 180,000 sq. yds. gravel street; bids until Aug. 12. (See Machinery Wanted—Street Improvements.)

Va., Alexandria—City will sell \$300,000 bonds for street improvements; E. F. Ticer, Chmn. Finance Committee.

Va., Norfolk—City let contract to Dawkins Construction Co., at \$89,724.68 to pave Main, Liberty Sts., Armistead Bridge road and other roads; Chas. E. Ashburner, City Mgr. (Lately noted to sell bonds.)

W. Va., Benwood—City will construct 2,400 sq. yds. paving on Marshall St.; bids until Aug. 27; J. Frank Brannen, Clk.; C. C. Smith, Civil Engr., 77 12th St., Bates Bldg., Wheeling, W. Va. (See Machinery Wanted—Paving.)

W. Va., Clarksburg—Harrison County let contract to M. J. Fahey to construct road and bridges; G. L. Coyle, Engr.

W. Va., Elkins—Randolph County let contract to Shald Contracting Co. at \$45,000 to pave Livingston Ave. and Buffalo St. in city; concrete; H. C. Kesling, County Clk. (See Machinery Wanted—Paver.)

W. Va., Huntington—Cabell County let contract to Brewer & Brewer, Chillicothe, O., to grade, drain and pave 1½ mi. Chesapeake-Kimballville road; macadam on sandstone base.

W. Va., Huntington—Cabell County will pave 2 mi. Norway road from Huntington city limits to Russell Creek. Address County Comms.

W. Va., Moundsville—City let contract to Kennedy Construction Co., Parkersburg, W. Va., to pave Tomlinson Ave.

Sewer Construction.

Ala., Anniston—City contemplates extending 6th ward sewers followed by extensions in other parts of city; plans by City Engr.

Ala., Tuscaloosa—City, D. B. Robinson, Prest. Board of Comms., contemplates construction of storm water sewers or drains, including manholes, inlets and connections; M. G. Kersh, City Clk.

Ark., Fort Smith—City will construct 2 storm sewers on 11th St. from A to S streets and North N St., from 6th to 7th Sts. Address City Comms. (Lately noted to construct sewers in Dist. 13.)

Ark., Gurdon—City plans installation of sewer system. Address The Mayor.

Fla., St. Augustine—City, E. Martins, Mgr., No. 9; construction by local labor; invites will expend \$8,000 on sewer extension in Dist. bids on materials; G. T. Butler, Engr. (See Machinery Wanted—Sewer Construction.)

Md., Cambridge—City will construct 2.25 ft. 8-in. terra cotta pipe sewers; bids in 1922; E. W. Ahlin, Mayor.

Mo., Excelsior Springs—City let contract to Harness Bros., Ottumwa, Ia., to construct sewage disposal plant; Walter Bales, City Clk., Excelsior Springs; Shockley Engineering Co., Engr., 800 Graphic Arts Bldg., Kansas City, Mo. (Previously noted inviting bids until June 9.)

Mo., Independence—City will construct sewerage disposal plant; bids opened Aug. 9; Burns McDonnell, Engr., Interstate Bank Bldg., Kansas City, Mo.

N. C., Boone—Appalachian Training School will install sewer system; \$8,000.

N. C., Charlotte—City Comms. will construct sewers on Dowd Rd., Kenilworth and

Parkwood Aves., in parts of Groveton and in North Charlotte; invites bids; contemplate bond issue; Joseph Firth, City Engr.

N. C., Elizabeth City—State Normal School will install sewer system and water works; approximate cost \$15,000; invites bids; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C. (Sewer Construction.)

N. C., Rocky Mount—City plans to improve sewer system. Address The Mayor.

Okl., Ada—City will construct sanitary sewers in Dist. No. 15; bids opened Aug. 2; W. B. Jones, City Clk.; Benham & Mullergren, Const. Engrs., Kansas City, Mo. (Lately noted voting bonds.)

S. C., Orangeburg—City, W. A. Livingston, Mayor, let contract to General Road Drainage & Construction Co., Columbia, S. C., at \$47,912.98 for sewer extensions. (Bids lately noted.)

S. C., Spartanburg—City will extend 6th ward sewer line north of G St. and east of Leighton Ave. north of 21st.; City Engr. instructed to make plans. Address Mayor Rudisill.

Tex., Colorado—City will construct sewage disposal plant; vote Aug. 2 on \$35,000 bonds. Address The Mayor.

Tex., Laredo—City will install sewage disposal plant, 800,000 gal. capacity; E. E. Sands, Engr.

W. Va., Clarksburg—Clarksburg Gas & Electric Co., will construct 14-in. private sewer from Power plant to Elk Creek, connect with city and storm sewer, extend 840 ft.; cost about \$4,000.

Shipbuilding Plants.

N. C., Wilmington—Maryland Wrecking Co., John E. Smith, Prest., Stone House Cove, Baltimore, Md., has purchased Carolina Shipyards. (Lately noted Chamber of Commerce interested in purchase.)

Telephone Systems.

Ala., Anniston—Southern Bell Telephone Co. will expend \$55,000 to enlarge system.

S. C., Greenwood—Greenwood Radio Club, George Cothran, Prest., plans to install wireless equipment in Community Hall.

Va., Tazewell—Bluefield Telephone Co., John Lincoln, Prest., increased capital from \$300,000 to \$500,000.

W. Va., Martinsburg—Chesapeake & Potomac Telephone Co., R. W. Stake, local manager, will expend \$5,125 for telephone exchange additions, also plans merging of Cumberland Telephone Co. central office with Chesapeake & Potomac Co.

W. Va., Shinnston—Clay Dist. Telephone Co., inceptd. by W. J. Currey, E. W. Robinson, Frank Shriver.

Water Works.

Ark., Gurdon—City plans installation of water system. Address The Mayor.

Ky., Ashland—Comms. of Water Board secured option on site to construct additional reservoir; Alvord & Burdick, Const. Engrs., 8 LaSalle St., Chicago, Ill.

Ky., Harrodsburg—City will construct \$100,000 waterworks plant; Pearce Greeley & Henson, Engrs., Chicago, Ill.

Md., Baltimore—Board of Awards, Wm. F. Broening, Prest., will construct balancing reservoir, surge tank and closing shaft 13, Contract No. 51, Water Department; earth dam, sinking 2 shafts 12 ft. in diameter about 30 ft. deep, etc.; 14,000 cu. yds. rolled earth

embankment; 2,400 cu. yds. rock excavation; bids until Aug. 24; Wm. A. Megraw, Water Engr. (See Machinery Wanted—Waterworks.)

Mo., Barnard—City will construct waterworks; voted bonds; E. T. Archer & Co., Engr., 612 New England Bldg., Kansas City, Mo. (Previously noted.)

Mo., Hayti—City, S. P. Oates, Clk. will construct waterworks; two 100 ft. deep wells; two Triplex pumps direct connected to 15 H. P. oil engines; 10,000 lin. ft. 4 and 6 in. cast iron pipe; 30,000 gal. capacity steel tank on 100 ft. steel tower; bids until Aug. 13.

N. C., Boone—Appalachian Training School will install waterworks; \$36,000.

N. C., Elizabeth City—State Normal School will install water works and sewer system; approximate cost \$15,000; invites bids; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C. (See Machinery Wanted—Waterworks.)

N. C., Lexington—Town will extend water and electric light systems; issue \$50,000 bonds; Paul R. Raper, Clk. Comms.

N. C., Rocky Mount—City plans to improve waterworks. Address The Mayor.

Okl., Tulsa—City will expend \$86,373 in extending water-works; daily capacity 4,000,000 gals; erect 54 ft. brick, filter house addition, \$7,000; install equipment for four filters; 12 MGD pump, piping; construct concrete settling basin, inside dimensions 101x180 ft. x 13-15 ft. depth, \$40,000; bids until Aug. 13; Holway Engineering Co., Engr., 332 Atco Bldg. (See Machinery Wanted—Waterworks.)

S. C., Barnwell—City let contract to Concrete Construction Co., at \$45,000 to construct watermain; W. S. Tomlinson, Engr., National Loan Exchange Bank Bldg., Columbia, S. C. (Lately noted.)

S. C., Orangeburg—City, W. A. Livingston, Mayor, let following contracts for water extensions, etc.: To American Cast Iron Pipe Co., Birmingham, Ala., at \$21,014 to furnish pipe and fittings; to Ransell Valve Co., at \$2,296.10 for fire hydrants; to Grinnell Co., Charleston, N. C., at \$1,489.70 for valves and boxes. (Bids lately noted.)

Tenn., Nashville—City will extend water mains; vote on \$400,000 bonds. Address The Mayor.

Tenn., Pulaski—City will extend waterworks; vote Aug. 29 on \$40,000 bonds. Address The Mayor.

Tex., Albany—City may vote in August on \$100,000 water bonds. Address The Mayor.

Tex., Colorado—City will extend water system; vote Aug. 2 on \$85,000 water bonds. Address The Mayor.

Tex., Crowell—City will improve Waterworks voted \$100,000 bonds. Address The Mayor.

Tex., Houston, Magnolia Park—F. A. Baldinger, Mayor, will construct deep well complete with deep well centrifugal pump and electric motor; bids until Aug. 10; E. E. Sands, Const. Engr., 421 Mason Bldg. (See Machinery Wanted—Waterworks.)

Tex., Ranger—Ranger Waterworks will expend \$100,000 for additions to waterworks, including \$50,000 addition to reservoir. Address M. H. Hagaman, Owner. (Lately noted inceptd., capital \$400,000.)

Tex., Terrell—City Comsn. let contract to Chicago Bridge & Iron Works Co., 2105 Old Colony Bldg., Chicago, Ill., at \$7,700 to erect standpipe, 22 ft. diam., 100 ft. high.

Va., Coeburn—Coeburn Utility & Mfg. Co., capital \$50,000, inceptd. with W. S. Dodd, Prest.; J. M. Millin, Jr., Secy.

Woodworking Plants.

Fla., Jacksonville — Carriages — Chapman Carriage Works, W. E. Sweeney, Prest., 332 W. Forsyth St., will erect 3-story brick building, steel frames with reinforced concrete; \$100,000; Marks & Shettall, Archts.; mfrs. carriages, automobile tops and parts.

N. C., Morganton — Doors, Sash, etc. — Morganton Mfg. Co., capital \$100,000, inceptd. with C. A. Spencer, Prest.; W. A. Leslie, Secy. — Treas.; mfrs. sash, doors, mantles, flooring, etc.

Va., Roanoke — Flooring — Harris Hardwood Co., Geo. L. Wade, Mgr., Box 950 will erect 80 x 120 ft. main building, mill construction, \$20,000 also 80 x 120 ft. dry kilns, brick construction, \$20,000; bids until Sept. 15; install planing mill mchy.; \$40,000; daily output 30,000 ft.; S. M. Cloyd, Const. Engr. (See Machinery Wanted—Planing Mill Machinery.)

Fire Damage.

Ark., Lunsford — Tom Taylor's barn; loss \$15,000.

Ga., Augusta — Grand Hotel, 321 8th St.; loss \$12,000; owned by G. Lloyd Preacher.

Ky., Louisville — Two-story brick feed and grain store of Ritter, Hennings Co., 1315-17 W. Main St.; building owned by Mary Howe estate, Washington, D. C.

La., Leesville — Louisiana Oil Refining Co., Caddo Central Oil & Refining Co.'s plants; loss, \$20,000.

Md., Hagerstown — Brick building on N. Prospect St., owned by Frank C. Beachley and others.

Md., Ridgely — Albert W. Saulsbury's theater.

Miss., Fulton — Gulf Lumber Co.'s Commissary.

Miss., Gulfport — C. Mitchell's market building at end of 25th Ave.; loss \$100,000.

Mo., Kansas City — Rowe-Kinney Metal Bed & Springs Co.'s building; other buildings damaged were Union Pacific Tea Co., Crown Cork & Seal Co. and K. P. Supply Co.

Mo., Kansas City — Warehouse on Baltimore Ave., nr. 20th St., occupied by Kinney-Rome Metal Beds and Springs Co., Imperial Storage and Transfer Co., K-B Supply Co., Tree Candy Co., and Midwest Steel Products Co.; loss on building, \$20,000.

Mo., Belleville — Belleville Lumber Co.'s plant; loss \$100,000.

Mo., Kansas City — Building occupied by Pehl Body Co., Col. T. M. Murohy, Secy. and Treas.; loss \$20,000; Ellis-Harris apartment building, owned by C. C. Welch, 612 Bryant St., A. L. Albetzer, agent, 920 Garfield Ave.

Mo., St. Louis — G. Mathes Co.'s building at N. Main and Madison Sts.; occupied by Natl. Wool Stock Co.; loss on building \$15,000.

N. C., Hillsboro — Miss Rebekah Cameron's residence.

Okla., Keneffick — J. P. Jeffrey's hardware store; loss \$25,000.

Okla., Tulsa — Tulsa Mill & Lumber Co.'s and Tulsa Cement Brick Co.'s warehouse at Owasso Ave. and Frisco tracks; loss \$15,000.

S. C., Greenwood — W. H. Haygood's stables; loss \$25,000.

S. C., McCormick — Residence occupied by Mrs. F. C. Witt and owned by Mrs. G. S. Touchstone, Columbia.

Tenn., Chattanooga — East Ridge school building; Address Board of Education.

Tenn., Greeneville — Mrs. A. M. Banks' residence in Sunburst Park.

Tex., Westminister — W. A. McDougal's store.

Va., Norfolk — Marmon-Haynes Corporation building; loss \$50,000.

Va., Ocean View, Station Norfolk — Shamrock Club building, Beacon Club building, owned by C. M. Mumford; cottages owned by L. C. Jones, W. L. Prieur, J. B. Griswold, A. D. Lapcini, H. W. Church and Walter Fentress.

Va., Petersburg — Martin & Son's cotton and peanut warehouse; loss over \$100,000.

Va., Staunton — Frank M. McComb's residence on Buttermilk Spring Rd.

apartment house on River Ave.; frame; David A. Lowl, Archt.

Tex., Waco — J. P. Hussdorfer & Son will erect apartment and business building at 711 N. 22nd St.; Jas. P. Baugh, Archt.

Association and Fraternal.

Ala., Decatur — Morgan County Post of American Legion, L. E. McGregor, Post Commander, plans to erect building.

Fla., Fort Pierce — Ancient Free and Accepted Masons plan to erect temple.

Fla., Miami — Knights of Columbus will erect building at N. E. 14th Ter.; 7 store rooms on first floor; 23 rooms on second.

Ky., Somerset — Knights of Pythias contemplate erecting \$60,000 temple.

La., Crowley — Woodmen of the World, J. W. Miles, Chrmn. Bldg. Comm., will erect building on Parkerson Ave.; lower floor for stores.

Mo., Jefferson City — Neosho Post of American Legion plans to erect memorial building.

N. C., Charlotte — Young Women's Christian Assn., Mrs. Walter H. Davidson, Prest., will alter and erect additions to building, including construction of swimming pool room; bids opened Aug. 10; drawings and specifications at office of Secy., Y. W. C. A. Bldg., and office of Chas. C. Hook, Archt.; separate bids for plumbing and heating.

N. C., Monroe — Masonic Temple Bldg. Co. will erect temple at Jefferson and Beasley Sts.; 3 or 4 stories.

Okla., Drumright — Building Comm., Ray Flood, Prest., will erect Masonic Temple; 2 stories; ground floor for commercial uses.

Okla., Frederick — Knights of Pythias and Order of Odd Fellows plan to erect joint fraternal building at Grand Ave. and 10th St.; 3 stories; store on first floor; offices on second; lodge rooms on third.

Okla., Wetumka — Odd Fellows Lodge will erect \$16,000 building; brick and stone; contract let.

Tex., Dallas — Young Women's Christian Association, Mrs. W. D. Felder, Chrmn. Bldg. Comm., will erect building at Jackson and Prather Sts.; cost \$350,000; 4 stories and basement; C. D. Hill & Co., Archts.

Tex., Houston — Temple Lodge, No. 4, and Gray Lodge, No. 329, A. F. & A. M., will erect \$200,000 temple; 3 stories; first floor for stores; second rest rooms and parlors; third lodge rooms.

W. Va., Logan — Logan Lodge No. 1391, B. P. O. Elks, C. C. Chambers, Exalted Ruler, plans to erect building.

Bank and Office.

Fla., Sulphur Springs — Bank of Sulphur Springs, E. W. Coates, Prest., Tampa, will erect \$10,000 bank building 25x55 ft.; brick; J. F. Kennard, Archt., Tampa. (Lately noted.)

Fla., Tampa — T. E. Lucas will erect 2-story office building at Tampa and Madison Sts.; M. Leo Elliott, Archt.

Md., Cumberland — Algonquin Bldg. Co., Wm. J. Morley, Francis S. Deekens and J. A. Fitzpatrick, Structural Engr., is reported to erect office building at 3-12 S. Center St.; 12 stories; fireproof; 240 offices; swimming pool in basement; arcade for stores; cafeteria on roof; cost \$400,000; Thos. W. Biddle, Jr., Archt.

Okla., Ardmore — State National Bank, Harold Wallace, Prest., plans to erect bank and office building; 7 or 10 stories.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

Fla., Daytona — R. M. Bailey will erect apartment house; 82x54 ft.; 3 stories; 12 apartments; Dennison interlocking tile and stucco; built-up roof; rift pine floors; gas radiators; electric lighting; dumb waiters; Jacob Espidahl, Archt. (Lately noted.)

Fla., Miami — Philip D. Dusenbury will erect 3-story apartment building at N. E. 9th St. and 2nd Ave.; 40x90 ft.; cost \$25,000; concrete blocks; beam and pilaster construction.

Fla., Miami — G. J. Eblin will remodel J. K. Dorn Bldg., on N. E. 1st St., nr. 2nd Ave., for apartment house or hotel; 3 stories; cost \$60,000; H. Geo. Fink, Archt.

Fla., Palatka — L. A. Smith and Andrew Shelley will erect \$20,000 apartment building.

Ga., Atlanta — J. H. Whisenant will erect apartment house at 14th and Piedmont Aves.; 21 apartments; brick and interlocking tile; tile and tar and gravel roof; concrete, hardwood and tile floors; metal doors; wire glass; ventilators; steel sash and trim; steam heat; electric lighting; E. C. Seiz, Archt.; construction by day labor. (Lately noted.)

La., Shreveport — R. K. Casey will erect apartment house at 1712 Fairfield Ave.; cost \$40,000.

N. C., Winston-Salem — B. Swartz will erect apartment building on N. Main St., nr. Liberty St.; 70x80 ft.; 3 stories and basement; fireproof; brick 4 stories on first floor; C. Gilbert Humphreys, Archt.

Tenn., Memphis — Jos. Hanover will erect apartment house on E. Parkway nr. Poplar Ave.; site 152x185 ft.; semi-fireproof; modified Spanish design; 24 apartments, each to have individual entrances and porches; brick and stone; vapor heat; tile floors in halls and bathrooms; cost \$150,000; S. J. Weigel, Archt.; Irvin D. McDaniel, Asso. Archt.

Tex., Houston — Matt Statz will erect apartment house on W. Alabama St.; cost, \$15,000; frame and brick veneer.

Tex., San Antonio — Atlee B. Ayres is preparing plans for 3 story apartment house at San Pedro and Woodlawn Aves.

Tex., San Antonio — E. L. Hoffman will erect apartment house on Courtland Pl.; cost \$13,000.

Tex., San Antonio — Mr. Braun will erect

Tex., Oak Cliff, Station Dallas—Home Trust & Savings Bank, Hugh W. Ferguson, Dallas Joint Stock and Land Bank, and others interested, will incorporate with capital stock of \$100,000; plans to erect building at Jefferson and Tyler Sts.

Churches.

Md., Rising Sun — Methodist Episcopal Church will erect building on N. Walnut St. Address The Pastor.

Mo., Kansas City—Roanoke M. E. Church, Rev. A. E. Swedberg, Pastor, will erect building at 41st and Bell Sts.; 60x106 ft.; brick; assembly hall to seat 250; community hall, 55x36 ft.; rolling partitions to provide 10 class rooms and stage; locker rooms, shower baths in basement; gymnasium equipment in hall; cost \$30,000.

Mo., St. Louis—Jewel Baptist Church, Rev. E. A. Partney, Pastor, will erect building at Osceola St. and Virginia Ave.; cost \$75,000; auditorium, balcony, basement, etc.

Okla., Guthrie—First Christian Church will expend \$19,000 to enlarge building; 50x53 ft.; brick; asbestos shingle roof; concrete and pine floors steam heat, \$2,000; electric lighting; address Rev. J. W. Kilborn, Pastor, 202 N. Broad St. (Lately noted.)

Okla., Henryetta — Christian Church will erect parsonage and enlarge church building. Address The Pastor.

Tex., Houston — Trinity Episcopal Church will erect tower on building at Holman and Main Sts.; cost \$11,000. Address The Rector.

Tex., Plainview—Baptist Church plans to erect \$60,000 building. Address The Pastor.

Va., Norfolk—Third Christian Church, Rev. L. E. Smith, Pastor, will erect \$350,000 building at 34th St. and Llewellyn Ave.; Wm. H. Nicklas, Archt., Cleveland, O.; V. B. Perry, contractor to move present building from site.

Va., Petersburg—Washington Street Methodist Church, Rev. J. B. Winn, Pastor, will erect 2 wings and dome on present structure; cost \$100,000.

W. Va., Parkersburg—United Brethren Congregation will erect \$12,000 brick building at Vienna.

W. Va., Ronceverte — Methodist Episcopal Church, South, will erect building at Locust St. and Pocahontas Ave. Address The Pastor.

City and County.

Ala., Birmingham—Market — City Commission adopted ordinance authorizing election Oct. 10 on \$300,000 bonds to erect municipal market.

Md., Baltimore—Fire Engine House—Board of Awards, Wm. F. Broening, Prest., opened bids to erect No. 40 engine house, Liberty Heights and Packard Aves.; General Constr. Co., Calvert Bldg., lowest bidder at \$20,000. (Lately noted.)

Md., Baltimore—City Hall—Board of Awards, Wm. F. Broening, Prest., City Hall, will construct counters, partitions, desks, etc., on first floor in rotunda of City Hall; bids received at office of Richard Gwinn, City Register, City Hall, until Aug. 10; drawings and specifications at office of J. F. Crowther, Inspector of Buildings, City Hall.

N. C., Asheville—Home—County Commrs., B. A. Patton, Chmn., will erect \$25,000 children's home; 2 stories; Smith & Carrier, Archts.; bids opened. (Lately noted.)

Tex., Edna — Jail — Jackson County, S. G.

Sample, County Judge, will erect fireproof jail; 2 stories; cost about \$35,000; bids opened Aug. 8.

Tex., Houston—Home—Harris County Commissioners will erect home for old folks and auxiliary buildings on Crosby Rd., about 9 mi. from Houston; bids opened Aug. 11.

Tex., McKinney—Auditorium, etc.—City Commission will erect live stock pavilion and auditorium; cost \$25,000; 80x100 ft.; brick and concrete; concrete floors; metal doors; wire glass; Sparger & Peters, Archts., Bonham; bids opened. Address Chas. Schultz, McKinney. (Lately noted.)

Tex., San Antonio—Comfort Stations — City Commrs. will erect 2 comfort stations; cost \$7,500 each.

Va., Portsmouth—Jail—City, J. P. Jervey, Mgr., opened bids to erect and equip jail; following are low bidders: Gooch-Williams Co., Norfolk, construction, \$35,334; Roanoke Iron & Bridge Works, Roanoke, steel cells, \$81,000; Oscie Dashiell & Son, Portsmouth, plumbing, \$7,680. (Previously noted.)

W. Va., Glenville—Jail and Office Building — Gilmer County Court will erect jail and office building; bids received until Aug. 9 at office of clerk; also received by Fred Lewis, Agent at Ruffner Hotel, Charleston, Aug. 6 and at Waldo Hotel, Clarksburg, Aug. 8; A. N. and R. R. West, Archts., Glenville; plans and specifications from Clk. of Court.

Courthouses.

W. Va., Logan—Logan County Court, T. J. Wysong, Clk., will open bids Aug. 20 to repair courthouse; W. B. Smith, Archt.; plans and specifications at office of Clerk.

Dwellings.

Ala., Birmingham—Jas. D. Wilcox will erect residence at Cliff Rd. and 41st St., south; cost \$10,000; 2 stories; frame.

Ala., South Highland, Station Birmingham—B. M. Brassfield will erect \$15,000 residence on Crest Rd.; brick veneer.

D. C., Washington—A. Lisner, Palais Royal, will erect residence on Sheridan Circle and Massachusetts Ave.

Fla., Interlachen—Chas. Frances will erect number of cottages.

Fla., Miami—Antonio Vasile will erect rooming house at Waldins addition, North Miami; cost, \$10,000; concrete blocks.

Ga., Savannah—Jos. R. Rossignol & Co. will erect number of bungalows in Chatam Crescent section; stucco.

Ga., Savannah—O. T. McIntosh will erect residence at Demere's Point, Isle of Hope.

Ky., Louisville—Dr. I. N. Bloom will erect residence on Cherokee Rd., at entrance to Cherokee Park; 2½ stories; brick; red tile roof; Joseph & Joseph, Archts.

Ky., Middletown—A. P. Stitzel will erect residence; 2 stories; colonial type; brick; red tile roof; Joseph & Joseph, Archts., Louisville.

La., New Orleans—Sam Maggio will erect 3 double cottages at 2717-27 Valence St.; cost, \$10,700; construction by owner.

Md., Baltimore — Frank O. Singer, Jr., Equitable Bldg., will erect 12 two-story brick dwellings at 2100-10 Rupp St. and 2101-11 Rupp St.; 21x33 ft.; slag roofs; cost \$20,000; W. B. Gerwig Archt., Equitable Bldg.; construction by owner. (Lately noted.)

Md., Baltimore—Isaac C. Rosenthal, 3411 Holmes Ave., will erect 37 dwellings on Denmore Ave., nr. Singer; cost \$130,000; 2 stories;

brick; built-up roof; hardwood floors; hollow fireproof tile; Stanislaus Russell, Archt., 11 E. Lexington St. (Lately noted.)

Md., Baltimore—Wm. J. Peters, Carroll Rd., will erect 10 two-story brick dwellings at 1323-31 Weldon Ave. and 1312-20 Weldon Ave.; 13.6x42 ft.; slag roofs; furnace heat; cost \$18,000; Callis & Callis, Archts., 2055 Kennedy Ave.; construction by owner.

N. C., Asheville—L. B. Jackson Co. purchased 8 lots on Biltmore Rd. and will erect 4 dwellings; English type; stucco; 6 to 7 rooms each; plans to erect 4 additional dwellings upon completion of these; total cost \$60,000; Chas. M. Parker, Archt.; will also erect \$15,000 residence on Macon Ave., Grove Park.

N. C., Winston-Salem—Dallas C. Kirby will erect residence at Lockland Ave. and Everett St., Ardmore.

N. C., Winston-Salem—C. T. Fetter, Keystone fireproofing Co., Philadelphia, is reported to erect \$12,000 residence at Buena Vista development.

Okla., Oklahoma City—Sinizer Constr. Co., will erect frame residence and garage at 408 W. 19th St.; cost \$10,000.

Okla., Oklahoma City—C. E. Smith will erect 2 frame dwellings at 216 and 212 W. 24th St.; cost \$10,000; also garages.

Tenn., Memphis—Dr. W. R. Bethua will erect residence on N. McLean Blvd., nr. Poplar Ave.; bungalow type; brick veneer; Walter R. Nelson, Archt., McCall Bldg.

Tenn., Memphis—Mrs. A. R. Williams will erect residence at 24 S. McLean Blvd.; Raymond B. Spencer, Archt.

Tex., Dallas—A. Topfritz will erect residence and garage at 2635 Forest St.; 7 rooms; brick veneer; cost \$16,000.

Tex., San Antonio — L. L. Stevenson will erect residence at Olimpin Way and McCullough Ave.; cost \$22,000; 10 rooms; tile and stucco.

Government and State.

Fla., Tallahassee—Capitol — Board of Commissioners of State Institutions will erect extension to and remodel capitol; cost \$250,000; H. J. Kluthe, Archt., Jacksonville. (Lately noted.)

Tenn., Nashville — Memorial Building and Capitol Annex—Tennessee Memorial Comsn., Hill McAllister, Chmn. Sub. Comm., Capitol, will select 3 architects from Tennessee and 3 outside of State to prepare competitive plans for memorial and capitol annex buildings; total cost \$2,000,000; will select Tennessee's architects by preliminary competition; blank forms obtainable from Mr. McAllister, to be filled out and mailed by Aug. 10; Warren P. Laird, Advisory Archt., University of Pennsylvania, Philadelphia. (Lately noted.)

Hospitals, Sanitariums, Etc.

D. C., Washington—Hamilton Hotel Corp. will erect hotel at 14th and K Sts., N. W.; 11 stories; 310 rooms with bath; 107x102 ft.; J. H. DeSibour, Archt., Hibbs Bldg.

Fla., Miami—Geo. A. McKinnon will erect 4-story addition to Hotel McKinnon; 35x70 ft.; reinforced concrete; 50 rooms.

La., Jackson—State, John M. Parker, Gov., Baton Rouge, will expend \$500,000 to erect 2 concrete buildings at Hospital for Insane and make other improvements, also expend about \$500,000 to erect 3 concrete and brick dormitories, concrete dairy barn and silos at Hospital for Insane at Pineville; fireproof.

La., Pineville—State, John M. Parker, Gov., Baton Rouge, will expend about \$500,000 to erect 3 concrete and brick dormitories, con-

crete dairy barn and silos at Hospital for Insane. (See La., Jackson.)

N. C., Winston-Salem—City will erect addition to hospital; 3 stories and basement; 25 rooms; Chas. Barton Keene, Archt., 1218 Chestnut St., Philadelphia.

Okl., Norman — Board of Public Affairs, Geo. F. Clark, Chrmn., Oklahoma City, will erect 2 ward buildings at Central State Hospital; Layton, Smith & Forsyth, Archts., Oklahoma City; bids opened.

Okl., Oklahoma City — Soldiers' Relief Comsn., H. B. Fell, Chrmn., Room 54 State House, will erect addition to University Hospital; Hawk & Parr, Archts., Magnolia Bldg.; bids received until Aug. 11.

Okl., Oklahoma City—State Board of Public Affairs, Geo. F. Clark, Chrmn., will remodel first floor of University Hospital for soldier patients and erect administration building for former service men; bids opened Aug. 11; Hawk & Parr, Archts.

Okl., Supply—State Board of Public Affairs, Geo. F. Clark, Chrmn., Oklahoma City, will erect ward building at Western Oklahoma Hospital; Layton, Smith & Forsyth, Archts., Oklahoma City; bids opened.

Tenn., Nashville—Vanderbilt University will remodel medical building at 5th Ave. and Elm St., South Nashville, for hospital. Address The President.

Tex., Austin—Building Comm. of City Nurses' Home will erect building; Harris & Kreisler, Asso. Archts. (Lately noted under City and County.)

Tex., Fort Worth—Board of Trustees, Harris Memorial Methodist Hospital, J. Erskine Williams, Secy., purchased site at Hornsby, Lake, Cannon and 6th Aves.; plans to erect \$1,000,000 hospital; 400 rooms; 150 ft. front on Cannon Ave.; 6 to 10 stories; brick and stone.

Va., Norfolk—Treasury Dept., Jas. A. Wetmore, Acting Supvrg. Archt., Washington, D. C., will receive bids until Aug. 22 for construction (exclusive of mechanical equipment) of main hospital building, residence for officer in charge, nurses' quarters, laundry building, garage and boiler house of U. S. Public Health Service Hospital at Tanner's Creek; drawings and specifications from custodian of site at Norfolk or from office of Supvrg. Archt.

Hotels.

Ark., Glenwood—D. A. Hanna, Bowling Green, Ky., and others plan to erect \$1,000,000 tourists' and resort hotel on Burnham Mountain; Burnham Engineering Co., Archt. and Engr., Glenwood.

Okl., Healdton—New Windsor Hotel will rebuild burned structure; brick.

Tex., Austin—Chamber of Commerce, Ben M. Barker, Prest., is promoting erection of \$400,000 hotel; about 80x130 ft.; 8 stories; probably reinforced concrete and brick; metal ceilings; concrete and hardwood floors; ornamental terra cotta; safes; interior tile; metal doors; wire glass; mail chutes; vault lights; ventilators; steel sash and trim; address Mr. Barker. (Lately noted.)

Railway Stations, Sheds, Etc.

N. C., Burlington—Southern Ry. Co., J. S. Lemond, Chf. Engr., M. W. & S. Lines East, Charlotte, will erect passenger station, open street, etc.; cost \$45,000.

Okl., Tulsa—Missouri, Kansas & Texas

R. R., Frank Ringer, Chf. Engr., St. Louis, Mo., will erect additions to freight house.

Tex., Alice—State Railroad Comsn., Austin, directed Texas Mexican Ry. Co., S. W. DeWolf, V. P. and Gen. Mgr., Laredo, to erect station.

Miscellaneous.

Ala., Mobile—Fair—Fair Association, Jas. L. Caythorn, Prest., will erect merchants and manufacturers' building; 75x100 ft.; exhibit platform in rear.

Fla., Miami—Casino—Hardie's Casino will erect addition; 3 stories; 3rd story to extend over 2-story building; Gast & Martin, Contra. for masonry.

Miss., Meridian—Clubhouse—Meridian Business and Professional Women's Club plans to erect clubhouse.

Okl., Pawhuska—Amusement Park—Mark N. Revard plans to construct amusement park.

Tenn., Memphis—Amusement Building—Walter L. Vesey is promoting erection of amusement building on Parkway; will probably contain dance hall, swimming pool, restaurant, cabaret and soda room; cost about \$200,000; Mahan & Broadwell, Archts.

Schools.

Ala., Holt, Station Tuscaloosa—Board of Education will erect high school building; cost \$60,000; 10 class rooms and auditorium; D. O. Whildin, Archt., Birmingham.

Ala., Livingston—Livingston Normal School, Dr. G. W. Brock, Prest., will erect 1 story brick practice school building and auditorium; bids opened Aug. 6.

Ala., Mobile—Board of School Commrs. of Mobile County will erect school building nr. Mertz Station; cost \$20,000; brick or hollow tile walls; wood joists; composition or metal shingle roof; concrete and rift pine floors; ventilators; bids opened Aug. 4; C. L. Hutchisson, Archt., 32-33 Emanuel Bldg.; address Board of School Commrs., Barton Academy. (Lately noted.)

Ala., Mobile — Mobile County School Commissioners, S. S. Murphy, Supt., will remodel old Medical College building for school.

Ala., University—University of Alabama, Dr. Geo. H. Denny, Prest., plans to erect \$100,000 building.

D. C., Washington—Department of the Interior, F. M. Goodwin, Asst. Secy., will receive bids until Aug. 23 for (1) construction of fireproof building for home economics and dining hall at Howard University; (2) installation of heating, plumbing and gas; (3) electrical installation; (4) furnishing, erecting and painting structural steel and iron work for said building; copies of drawings and specifications from Dept. of the Interior.

Fla., Pensacola—Board of Public Instruction will receive bids until Aug. 27 at office of A. S. Edwards, Supt., to erect 3-room frame addition to Allie Yulestra school, with alternate on 2-room addition; toilets at Elize Jane Wilson school and Sabra H. Collins school. (Lately noted.)

Fla., Quincy—County Board of Public Instruction will erect high school building; cost \$75,000; brick and stone; 14 rooms; domestic science and manual training departments; study hall and auditorium to seat 650; Dunham vapor heat; Mark & Sheftall, Archts., Jacksonville; bids opened. (Lately noted.)

Fla., St. Augustine—Board of Control, P. K. Yonge, Chrmn., Tallahassee, will complete primary building and install heating at Florida School for Deaf and Blind; bids until Aug. 8. (See Fla., Tallahassee.)

Fla., Tallahassee—Board of Control, P. K.

Yonge, Chrmn., will erect primary building at Florida School for Deaf and Blind at St. Augustine; also complete building and heating for girls dormitory, complete assembly building and erect boys dormitory and install heating at A. & M. College for Negroes at Tallahassee; bids received until Aug. 8; drawings and specifications at office of Edwards & Sayward, Archts., 609 Chamber of Commerce Bldg., Atlanta and at offices of Presidents of each institution.

Ky., Winchester — Kentucky Wesleyan College, Dr. W. B. Campbell, Prest., will erect dormitory of 150 rooms, gymnasium and addition to girls' hall; total cost \$250,000.

La., Baton Rouge—State, John M. Parker, Gov., is erecting 5 brick and concrete buildings at Southern University; 2 to be equipped for machine shops for industrial training.

La., DeQuincy—See La., Lake Charles.

La., Lake Charles—Calcasieu Parish School Board, F. K. White, Secy., will erect 1-room frame school at Lockport; I. C. Carter, Lake Charles, Archt.; rebuild De Quincy negro school; erect negro frame school building about 6 mi. from Lake Charles and negro frame school at Sulphur; bids received until Aug. 2.

La., Lake Sulphur—See La., Lake Charles.

La., New Orleans—City Board of Education, J. M. Gwinn, Supt., will erect 12-room addition to Gayarre school; probably apartment for manual training; brick; frame interior; automatic sprinkler equipment; E. A. Christy, Chf. Archt., Building Division. (Lately noted.)

La., Rayville—Richland Parish School Board will erect building; cost about \$110,000; 180x140 ft.; brick and steel; Barrett specification roof; yellow pine floors; metal ceilings; plaster board; ornamental terra cotta; ventilators; steam heat; electric lighting; Edw. F. Nield, Archt., Shreveport; bids opened Aug. 9. Address E. E. Keebler, Supt. of Parish Schools, Rayville. (Lately noted.)

Miss., Natchez—School Board, W. M. Steitlenroth, Chrmn. Bldg. Comm., will repair number of schools; bids opened.

Mo., St. Louis—Arch-Bishop John J. Glennon purchased site at Kingshighway and Cote Brillante and plans to erect \$200,000 high school for boys.

N. C., Boone—Board of Trustees of Appalachian Training School will expend \$36,000 for installation of water system, \$8,000 for sewerage and \$8,000 for heating plant.

N. C., Elizabeth City—State Normal School will install waterworks and sewer system; cost \$15,000; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

N. C., Kernersville—Kernersville School Dist. will vote Sept. 6 on \$25,000 bonds to remodel and enlarge school buildings; Leon Cash, Chrmn. Board of County Commrs.

N. C., New Bern—Board of Education, T. A. Green, Chrmn., will erect Ghent and Riverside School buildings; bids received until Aug. 9; plans and specifications from Jas. F. Gause, Archt., Murchison Bldg., Wilmington.

S. C., Charleston—Board of Trustees of high school, N. V. Haseldon, Chrmn., will receive bids until Aug. 24 to erect high school building at 147-51 Rutledge Ave.; separate bids on general, heating and plumbing contracts; cost about \$140,000; 126x118 ft.; 3 stories; semi-fireproof; Barrett specification roof; wood, tile and concrete floors; plaster board; metal doors; wire glass; ventilators; steel sash and trim; plans and specifications from Benson & Barbot, Archts., 26 Broad St. (Lately noted.)

residence on College St., nr. Gilmore; 2 stories; frame; cost \$14,000; P. J. McCullough, Contr.

Fla., Fort Lauderdale—M. Rippa, Miami, will erect 56 cottages at Central Ave. and 27th and 28th Sts.; 3 rooms, front and back porch; contract let.

Md., Baltimore—Morton Hecht, Baltimore and Charles Sts. will erect residence and garage on Bancroft Rd., nr. Park Heights Ave.; 45.8 x 35.8 ft.; 2 stories and basement; brick; slate roof; hot water heat; cost \$25,000; Smith & May, Archts., Calvert Bldg.; Frainie Bros. & Haigley, Contrs., 18 Clay St. (Lately noted.)

Ga., Adel—P. J. Castleberry will erect residence; bungalow type; 57x50 ft.; stucco; asphalt or slate roof; rift pine and hardwood floors; Floyd Greer, Archt., Valdosta; W. U. Davis, Contr., Adel. (Lately noted.)

Ky., Lexington—Sam Bedeman will erect residence at Stone and Kalmer Aves.; cost \$12,000; 2 stories; 10 rooms; H. A. Churchill, Archt.; J. T. Jackson Lumber Co., Contr.

La., New Orleans—Alphonse O. Harang and others will erect bungalow, Audubon Blvd. and Hickory St.; cost \$11,000; John F. Charlton, Contr.

N. C., Winston-Salem—N. H. Wright will erect residence at W. 5th and Poplar Sts.; Dutch colonial type; stucco; slate roof; C. Gilbert Humphreys, Archt.; J. E. Kennerly, Contr.

Tex., Austin—J. W. Graham will erect \$10,000 residence in Enfield addition; Glesecke & Harris, Archts., Littlefield Bldg.; Scott Yeamans, Contr.

Tex., Austin—F. B. King will erect \$12,000 residence in Enfield addition; Glesecke & Harris, Archts., Littlefield Bldg.; Scott Yeamans, Contr.

Tex., Austin—St. Mary's congregation, Rev. Walter Lavitt, Pastor, will erect residence at San Jacinto and 10th Sts.; cost, \$16,000; brick and stone stuccoed; 2 stories and basement; Glesecke & Harris, Archts., Littlefield Bldg.; Byrdson Bros., Contrs. (Lately noted.)

Tex., Waco—Albert T. Clifton will erect residence at Austin and 26th Sts.; cost \$50,000; Milton W. Scott & Co., Archts.; H. J. Ainsworth, Contr.

Hotels.

Fla., Winter Park—Alabama Hotel Co., 2d. F. Keelz, Prest., will erect tourist's hotel; 104 rooms, with private bath; contract let.

N. C., Reidsville—Reidsville Hotel Co. will erect hotel; cost \$96,000, exclusive of plumbing, heating and wiring; reinforced concrete and brick veneer; 5 stories and basement; 45x100 ft., with 1-story annex, 32x100 ft.; 62 rooms; 36 with private bath; fireproof; J. A. Jones Construction Co., Contr., Charlotte. (Previously noted.)

Miscellaneous.

Fla., Eustis—Sales Stable—W. M. Igon will erect sales stable on Bay St. and Citrus Ave.; cost \$18,000; 114x100 ft.; brick built-up roof; cement and wood floors; hot water heat, \$700; Alan J. MacDonough, Archt.; Arnold-McDonough Co., Contr. (Lately noted.)

Md., Baltimore—Show Building—Jos. Greenberg, Philadelphia, will erect building at Center and St. Paul Sts.; 1½ stories; cost, \$20,000; John Waters Bldg. Co., Contr., 23 E. Center St.

N. C., Charlotte—Mausoleum—C. W. Johnson will erect mausoleum in Elmwood Cemetery; 9 crypts; marble; bronze doors; cost,

\$14,000; Charlotte Marble & Granite Works, Contr. (Lately noted.)

Hospitals, Sanitariums, Etc.

Miss., Gulfport—Kings Daughters Hospital will erect building; cost \$90,000; W. E. Rubush, Contr., Jackson. (Lately noted.)

Railway Stations, Sheds, Etc.

Fla., Miami—American Railway Express Co. will erect building; 50 x 150 ft.; 1 story; concrete block; cost \$15,000; St. Johns Constr. Co., Contr. (Lately noted.)

Schools.

Ala., Cullman—Board of Education will erect high school building; W. A. Schlosser, Contr.

Ala., Pinson—Jefferson County Board of Education, Birmingham, will erect junior high school; cost \$18,500; 33 x 194 ft.; old field stone; composition shingle roof; rift pine floors; rolling partitions; D. O. Whildin, Archt.; Miller Bros., Contrs., both Birmingham.

Ala., Athens—City Board of Education will erect \$30,000 addition to school in Fairview; 6 rooms; D. O. Whildin, Archt.; Johnson, Chambers, & Co., Contrs., both Birmingham. (Lately noted.)

Ala., Jacksonville—Jacksonville Normal School, C. W. Daugeite, Prest., will erect 1-story brick training school; cost \$35,000; 170x160 ft.; auditorium, gymnasium, 6 class rooms and 2 offices; asbestos roof; pine floors; hollow fireproof tile; also construct sidewalks and driveways; J. Platt Roberts, Archt., Montgomery; Seaman Lumber Co., Jacksonville and Ogletree Constr. Co., Anniston, joint Contrs. (Lately noted.)

Ala., Mobile—Mobile County School Commissioners will erect addition to and improve Old Shell Road School, lately noted; cost, \$24,000; 2 wings, 24x65 ft.; brick walls; and gravel roof; ventilators; steam heat wood joists; fireproof corridors; tile, tar (contract not let); electric lighting; C. L. Hutchisson, Archt., Box 393. Address G. W. Chamblin Co., Contr. (See Machinery Wanted—Blackboards (Slate).)

Fla., Eustis—Arnold-MacDonough Co. will erect \$10,000 store; 25x60 ft.; brick; built-up roof; wood floors; Alan J. MacDonough, Archt.; construction by owner.

Fla., Vero—R. H. Hennig and F. W. Meyer will erect building at Osceola Blvd. and Seminole Ave.; 55x104 ft.; tile and stucco; 4 stores; Tyler & Son, Contrs., Fort Pierce.

Ga., LaGrange—Board of Education, A. H. Thompson, Prest., will enlarge high school building; provide auditorium to seat 900; fireproof stairs; individual lockers; cost about \$30,000; Lockwood & Poundstone, Archts., Forsyth Bldg., Atlanta; Jeffers Bros. & Anderson, Contrs., Montgomery, Ala. (Lately noted.)

Ky., Alexandria—Board of Education will erect \$40,000 high school; C. C. & E. A. Weber, Archts.; C. A. Rawlings, Contr., Builders' Exchange, both Cincinnati. (See Machinery Wanted—Lumber.)

Ky., La Center—Board of Education P. A. Jones, Prest., Wickliffe, will erect school at La Center, Kevel, and Barlow; cost about \$67,000; brick; Carey roof; wood floors; steam heat; electric lighting; A. F. Lindsay, Archt., Sikeston, Mo.; J. J. Miller, Contr., Illinois, Mo. (Lately noted.)

Md., Baltimore—St. John's Catholic Church will erect addition to rectory at 913 E. Eager St.; 16x24 ft.; 1 story; brick; tin roof; wood floors; steam heat, \$250; electric light-

ing, \$150; also erect addition to St. John's Female School; total cost about \$10,000; John K. Stack, Archt., 308 E. Lafayette Ave.; address Jas. J. O'Connor, Contr., 52 Knickerbocker Bld. (Lately noted.)

Md., Sparrows Point—Baltimore County Board of Education, Clarence G. Cooper, Supt., Towson, will erect high school building; 2 stories; 154x129 ft.; 30 class rooms and assembly hall to seat 800; Patio type interior arrangement, with assembly hall in center and class rooms surrounding; interior corridors and galleries; Smith & May, Archts., Calvert Bldg.; Frainie Bros. & Haigley, Contrs., 18 Clay St., both Baltimore. (Lately noted.)

Mo., Pilot Grove—Pilot Grove School Dist. will erect high school; cost \$26,000; 72x52 ft.; brick; gravel roof; pine floors; heating, \$1911; lighting, \$200; Ludwig Abt, Archt., Moberly; contract let. (Lately noted.)

Okla., Muskogee—State Board of Public Affairs, H. V. Bird, Secy., Oklahoma City, will erect \$50,000 dormitory to accommodate 50 girls; 2 stories; 40x90 ft.; brick; hollow fireproof tile and concrete; slate surfaced shingle roof; concrete floors; lower floor for shower baths, 10 living rooms, etc.; 2nd, open air sleeping rooms; H. O. Valeur & Co., Archts., 705 Manhattan Bldg.; Manhattan Constr. Co., Contr.; both Muskogee. (Lately noted.)

S. C., Greer—City Board of Education will erect high school; 3 stories; cost \$105,407; 14 rooms, auditorium and gymnasium; semi-fireproof; brick walls; ornamental terra cotta; concrete and hardwood floors; rolling partitions; wire glass; steel sash and trim; ventilators; Jas. J. Baldwin, Archt., Anderson, J. C. Cunningham, Contr., Greer. (Previously noted.)

Tenn., Alpine—Presbyterian Church will complete \$50,000 school building; W. S. Page, Contr., Lebanon.

Tenn., Memphis—H. L. Buckingham will remodel building at 56-58 S. Main St.; cost \$10,000; Semple & Logan, Contrs.

Tex., Brownwood—Daniel Baker College will erect Coggin Memorial Building for chapel and fine arts; cost \$60,000; auditorium to seat 800; C. D. Hill & Co., Archt., Dallas; Moore Constr. Co., Contr., Brownwood. (Lately noted.)

Va., Richmond—Board of Education, C. P. Walford, Clk., 803 E. Marshall St., will erect addition to Highland Park School; cost \$70,000; 107x62 ft.; brick and concrete; tile roof; wood and terrazzo floors; hot air heat; also erect North Side school; cost \$125,000; 156x101 ft.; brick and concrete; tin roof; hot air heat; Chas. M. Robinson, Archt., Times Dispatch Bldg.; J. T. Nuckols, Contr., 1102 E. Main St. (Lately noted.)

W. Va., Martinsburg—State Board of Control, Charleston, Jas. S. Lakin, in charge of construction, will erect \$150,000 school building, \$25,000 residence for superintendent, \$10,000 barn and expend \$10,000 for other buildings at West Virginia Industrial School for Boys at Pruntytown; H. U. Crummit, Supt. of Construction, Clarksburg. (Lately noted.)

Stores.

Ark., Arkadelphia—Caddo Mercantile Co. will erect building on Clinton St., nr. 7th St.; 100 x 125 ft.; pressed brick front; J. D. Brock, Contr.

Ark., Fort Smith—Fair Store will remodel building at 305 Garrison Ave. and erect annex; total cost \$35,000; extend building back 50 ft.; 2 stories with mezzanine floor for offices; build annex adjoining present

S. C., Darlington—School Board will erect 2-story building; 14 rooms, desires plans and bids for hot air heating system with ventilation. Address Bright Williamson, Prest. Bank of Darlington. (See Machinery Wanted—Heating Plant.)

S. C., Williston—Williston High School Trustees, Q. A. Kennedy and others, Bldg. Comm., plan to erect high school building and improve present structure; Lafaye & Lafaye, Archts., Columbia.

Tenn., Johnson City—City Comsn., P. F. McDonald, Comr. of Finance, will receive bids until Aug. 17 to erect junior high school building; plans from B. R. Beeson, Archt.

Tenn., Memphis—City Board of Education, G. W. Garner, Secy., will erect open air school building; separate bids received until Aug. 8 for construction of building and furnishing and installing heating system; Regan & Weller, Archts., Bank of Commerce & Trust Bldg.

Tex., Fort Worth—Riverside Independent School Dist. voted \$65,000 bond issue to erect high school building; will vote Aug. 27 on increase of maintenance tax. Address Board of Education.

Tex., Gladewater—Gladewater School Dist. voted \$25,000 bonds to erect school building; address County Board of Education, Longview.

Tex., Houston—Board of Education will erect 19 temporary 2-room school buildings; 3 at West End High School; 2 each at Montrose, Hyde Park, Helm, Travis, Dow, Gregory and Crawford schools; 1 each at Houston Harbor and Sunset High schools; 20x65 ft.; frame; composition roof; total cost about \$38,000.

Va., Lynchburg—Forest District School Board, C. H. White, Clk., will erect school building at Boonsboro; 3 rooms; bids received until Aug. 5 by Heard & Chesterman, Archts., 1004 Peoples Natl. Bank Bldg.

Va., Richmond—Sacred Heart School, Rev. F. F. Caup, will erect 2 wings to building at Floyd Ave and Spruce St.; 2 stories; 20 x 20 ft.; brick; cost \$10,000.

W. Va., Kimball—Board of Education, Browns Creek Dist., L. J. Hanifan, Supt., Welch, will erect grade and junior high school building; 57x74 ft.; 2 stories and basement; Alexander B. Mahood, Archt., Bluefield; bids opened.

W. Va., Lost Creek—Board of Education of Grant Dist., J. R. Batten, Secy., will alter and erect additions to school building; bids opened Aug. 9; plans and specifications at office of Stephen W. Ford, Archt., Latstetter Bldg., Clarksburg.

W. Va., Madison—Boone County Board of Education will erect 4-room school building at Walburn and 4-room building at Joe's Creek; bids received at Walburn on both buildings, Aug. 9.

Stores.

Fla., Bushnell—Crocker & Hooten purchased Clement block on Main St. and plans to erect brick building for stores, hotel and Masonic hall.

Fla., Fort Pierce—J. L. Kellams will erect business building on Orange Ave.; 36x45 ft.; frame and stucco; will also stucco adjoining building.

Fla., Plant City—Mayor Wm. Lee will erect store and office building; 105x105 ft.; 2 stories; 5 stores and 30 offices; cost \$40,000; M. Leo Elliott, Archt., Tampa.

Fla., Ybor City—Adam Wolfson and Mrs. Eva Wolfson will erect building at 7th Ave. and 17th St.; 2 stories; 70 x 95 ft.; brick; cost \$65,000; Francis J. Kennard, Archt., Tampa.

Ga., Atlanta—International Proprietaries, Inc., G. F. Willis, Prest., will erect fireproof building at Cone and Luckie Sts.; 3 stories; 62x100 ft.; first floor for stores, second and third for sales offices; A. Ten Eyck Brown, Archt., Forsyth Bldg.

La., New Orleans—Nathan Kohlman, Godchaux Bldg., leased 2 buildings at 744 Julia and 818 Carondelet Sts.; plans to convert ground floors into stores and upper stories into hotel rooms.

N. C., Gibsonville—Q. L. Cobb will erect 2-story brick building.

S. C., Hartsville—C. Adger Bruner will erect 3 store buildings; each 20 x 100 ft. 1 story; Paul Burns, in charge.

Tenn., Memphis—W. E. Crew is erecting building for studio and store on S. Bellevue Blvd., nr. Central High School; 2 stores on ground floor, studios on second.

Tenn., Trezevant—John Teague, Campbell, Mo., plans to erect store building; brick.

Tex., Dallas—A. Guidera will erect store and apartment building at 1714-20 S. Harwood St.; 2 stories; brick; cost \$30,000.

Tex., Houston—H. B. Tennison will erect 1-story addition to store and apartment house at Congress and Hamilton Sts.; cost, \$13,000; brick.

Tex., San Antonio—A. J. Root Co. of Texas will erect brick and tile store building on S. Flores St.; cost \$20,000.

Theaters.

Ky., Greenville—C. M. Martin and others are promoting company to erect building for theater, stores and apartments.

Ky., Somerset—Jos. Lawthorn will erect \$30,000 theater.

Warehouses.

Tenn., Nashville—H. G. Hill Grocery Co., will erect warehouse at Gay st. and 2nd Ave.; cost \$60,000.

W. Va., Huntington—Jebbia & Metz, Wheeling, leased site on 2nd Ave., nr. 7th St., and will erect building for wholesale fruit and produce business; install side track, etc.

BUILDING CONTRACTS AWARDED

Apartment Houses.

Fla., Eustis—E. T. Mackey will erect apartment house; cost \$30,000; 40x100 ft.; brick veneer; built-up roof; concrete and wood floors; ornamental terra cotta; sashes; interior tile; vaults; low pressure steam heat, \$3000; Alan J. MacDonough, Archt.; Arnold-MacDonough Co., Contr.

Md., Baltimore—Ephraim Bacon, 2943 Calvert St., will erect apartment house at 3101 St. Paul St.; 3 stories; 23.4x115 ft.; brick; tin and slag roof; hot water heat; cost \$35,000; Herbert C. Aiken, Archt., 4115 Ridgewood Ave.; Piel Construction Co., Contr., University Parkway. (Lately noted.)

Association and Fraternal.

La., New Orleans—Knights of Columbus Benevolent Assn. will expend \$100,000 to remodel building on Carondelet St., between Julia and St. Joseph Sts.; slate roof; concrete, oak and pine floors; plaster board; interior tile; ventilators; Burke & Dufrechou, Archts.; Lionel F. Favrot, Contr., 402 Canal Bank Bldg. (Lately noted.)

Bank and Office.

Fla., Clermont—First Natl. Bank will erect building; 30x40 ft.; brick; Barrett specification roof or equal; concrete, tile and wood floors; metal ceilings; metal doors; ventilators; hot air heat, \$250; city lighting; cost about \$10,000; Geo. Edw. Krug, Archt., Orlando; C. D. Butt, Contr., Clermont.

N. C., Asheville—Zimmerman & Son will erect store and office building at 56 Depot St.; 52 rooms; 3 stories; cost \$40,000; J. E. Joyner, Contr.

Tex., Beaumont—San Jacinta Life Insurance Co., H. M. Hargrove, Prest., will open bids about Aug. 20 to erect bank or store and office building at Orleans and Fannin Sts.; 10 or 12 stories; steel frame; fireproof; composition roof; marble, tile and cement floors;

steam heat; 3 elevators; cost about \$600,000; Sanguinet, Staats & Gottlieb, Archts., 718 Carter Bldg., Houston. (Previously noted.)

Churches.

N. C., Charlotte—Ebenezer Baptist Church will erect addition; cost \$18,500; 6 Sunday school rooms and auditorium; O. N. Payne, Contr.

Courthouses.

S. C., Allendale—Allendale County Courthouse and Jail Comsn., W. I. Johns, Chmn., will erect 2-story courthouse and 2-story jail and jailer's residence; cost about \$100,000; tin roofs; hollow fireproof and interior tile; metal ceilings; concrete and hardwood floors; plaster board; ornamental terra cotta; safes; metal doors; vaults; wire glass; steel sash and trim; ventilators; steam heat; electric lights; G. Lloyd Preacher & Co., Healey Bldg.; A. G. Krebs & Co., probable contrs., both Atlanta; Pauly Jail Bldg. Co., St. Louis, probable contr. for steel work in jail. (Lately noted.)

Dwellings.

Ark., Arkadelphia—John B. Brown will erect 5 bungalows on Cado St., nr. 2nd; 5 rooms; Spriggins & Son, Contrs. for 2; Jesse Rogers, Contr. for 1 and Mr. Bridges, Contr. for 2.

Fla., Clearwater—Clearwater Beach Co., will erect number of dwellings lately noted; cost \$3,000 to \$6,000 each; 1 and 2 stories; 6 to 10 rooms; hollow concrete walls; various kinds of roofing; concrete, tile and wood floors; plaster board; ornamental terra cotta; rolling partitions; wire glass; ventilators; steel sash and trim; electric lighting; heating; E. G. Fallin, Archt.; L. C. Fallin, Contr., both Plant City. (See Machinery Wanted—Building Material; Tile; Rolling Partitions; Wire Glass; Ventilators.)

Fla., Jacksonville—Otto Ziehe will erect

structure; install elevator, fixtures, etc.; Jake Truschall, Contr.

D. C., Washington—Ida Kressin, 725 12th St. N. W., will erect business building at 1001 H St. N. W.; cost, \$20,000; 24x64 ft.; 2 stories; stone and tapestry brick; tin roof; edge grain pine floors; metal ceilings; interior tile; steam heat, \$1,200; electric light—Loan & Trust Bldg.; Mr. Gumerich, Ing., \$500; Frank Pierson, Archt., Washington, 5th St. N. W.

Fla., Fort Meade—The Haberdashers will rebuild store; 22 x 75 ft.; 1 story; pressed brick front; tile floors; show windows; Robertson & Co., Contrs.

Fla., Jacksonville—W. D. Vinzant will erect building at Cedar and Adams Sts. to be occupied by Jefferies Meat Market; cost \$22,500; 100x58 ft.; 1 story; foundation to carry 4 additional stories; tapestry brick; concrete and white stone trimming; install meat storage plant; Ogram Constr. Co., Contr.

Ga., Savannah—Stanley Wolf will erect store and apartment building on W. Broad St., at Huntington; brick; 4 store rooms; 3 five-room apartments; cost \$17,000; Walter A. Chaffee, Contr.

Ky., Louisville—Central Furniture Co. will improve building, 226 W. Market St.; cost \$10,000; 2 stories; 40x60 ft.; D. X. Murphy, Archt.; Schrader Bros. Building Co., Contr. (Lately noted.)

Md., Baltimore—O'Neill & Co. will expend \$25,000 for alterations to store at Charles and Lexington Sts.; new front and interior improvements; John T. Bramble, Archt., 2 E. Lexington St.; Frainie Bros. & Halsey, Contrs., 18 Clay St.

Tenn., Memphis—R. A. Orgill will erect store buildings at 1714 Carnes St. and 838 Barksdale St.; cost, \$8,000 each; 1 story; brick and tile; W. H. Hudson, Contr.

Tex., Austin—Ross Malone will erect store building on Gaudalupe St.; 1 story; 50x80 ft.; brick; cost, \$10,000; Giesecke & Harris, Archts., Littlefield Bldg.; Chas. Ledbetter, Contr.

Tex., Laredo—Atlee B. Ayres and Robt. M. Ayres, San Antonio, prepared plans for \$45,000 building; first floor and basement for stores; second and third offices; Jambers Construction Co., Contr., San Antonio.

Tex., Temple—V. Kemendo Co. will erect building on S. Main St. for wholesale produce business; 45 ft. front; brick; J. H. Davis, Contr.

Tex., San Antonio—W. F. Schutz will erect 2-story building at Navarro and Crockett Sts. for stores, restaurant and offices; cost \$32,000; 87x32 ft.; Emmet T. Jackson, Archt.; Chas. M. Schoenfeld, Contr. (Lately noted.)

Tex., San Antonio—Mrs. Henry Terrell will erect store building; cost \$16,000; 1 story;

46x141.6 ft.; concrete and hollow tile; gravel roof; cement and tile floors; Ernest Scrivener, Contr. (Lately noted.)

Va., Norfolk—Phillips-Adam Co. will erect addition to store building; 57.6x89 ft.; brick; 2 stories; cost, \$11,290; R. H. Hoggard, Contr.

Va., Norton—Wise Hardware Co. will erect building at 6th and Park Aves.; 2 stories; brick; foundation to carry additional stories later; contract let.

Theaters.

Miss., Gulfport—V. A. Anderson will erect moving-picture theater; cost, \$34,000; 50x100 ft.; hollow tile and pressed brick; 4-ply built-up room; cement and tile floors; heating and plumbing, \$4,382; ornamental terra cotta; Shaw & Woleben, Archts.; Guiley & Craig, Contrs. (Previously noted.)

Tex., Beaumont—A. Delaune, will erect theater and business building; cost \$35,000; 58x140 ft.; ordinary construction; Barrett specification roof; cement and tile floors; metal ceilings; plaster board; gas heat; city lighting; A. Babin, Archt.; Herman Weber, Contr. (Lately noted.)

Va., Blacksburg—W. B. Ellett, Agent, will erect building for picture show; 31x105 ft.; brick; asbestos roof; maple floors; steam heat; W. W. Gray, Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Belt(ing)(Conveyor).—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Aug. 15 to furnish 400 ft. 6-ply and 600 ft. 8-ply* conveyor belt(ing). Blank forms and information (Circular 2276) on application to offices of: Panama Canal, Asst. Purchasing Agts. at Fort Mason and San Francisco.

Blackboards (Slate).—C. L. Hutchinson, Box 393, Mobile, Ala.—Slate blackboards for school building.

Bridge Construction.—City, J. W. Ring, Mayor, Elkin, N. C.—Bids to build reinforced concrete bridge 200 ft. long with 18-ft. roadway and sidewalks over Elkin Creek; bids opened Aug. 10; plans, etc. with Town Clk.

Bridge Construction.—City, Lee M. Myers, Mayor, Bonham, Tex.—Bids to build bridge over Powder Creek; concrete; \$5,000; bids opened Aug. 10; E. Whedbee, Engr.

Bridge Construction.—Webster County Court, Dixon, Ky., and Crittenden County Court, Marion, Ky.—Will invite bids for steel superstructure for intercounty bridge over Trade-water river.

Bridge Construction.—Yell County, T. E. Wilson, County Judge and Ex-Officio Bridge Commr., Dardanelle, Ark.—Bids to construct suspension bridge across Bayou at Smiley's crossing; reinforced concrete towers; bids opened Aug. 15.

Bridge Construction.—Cherokee County Highway Comsn., Gaffney, S. C.—Bids until Aug. 18 to construct and reconstruct 625-ft. steel bridge across Big Thicket Creek; 401,600 lbs. structural steel; plans, etc., with T. J. Hester, County Engr., Gaffney, and State Highway Engr., Columbia, S. C.

Bridge Construction.—Palo Pinto County, E. L. Pitts County Judge, Palo Pinto, Tex.

Broom Making Machinery.—Carter & Carter, Garland, N. C.—Broom making mchy. and material, daily capacity 25 doz. brooms; prefer gasoline engine to drive mchy.

Broom Making Material.—Carter & Carter,

Garland, N. C.—Material for mfr. of brooms, daily capacity 25 doz.; prefer gasoline engine to drive mchy.

Building Material.—L. C. Fallin, Plant City, Fla.—Building material for number of residences at Clearwater, Fla., including hollow fireproof tile, interior tile, hardwood, wood block and concrete floors; plaster board, ornamental terra cotta, wire glass, steel sash and trim.

Cement.—Mississippi River Comsn., 1st and 2nd Dist., Customhouse, Memphis, Tenn.—Bids until Aug. 11 to furnish and deliver 20,000 sacks Portland cement; information on application.

Chewing Gum Machinery.—E. K. McCoy, 408 30th St., Norfolk, Va.—To correspond with mfrs. of mchy. used for mfr. of chewing gum.

Compressor.—Howard B. Johnson, 20 E. Jackson Blvd., Chicago, Ill.—35 to 500 ton vertical steam driven ammonia compressor; good condition; not over 5 years old; floor space important.

Concrete Stone Products Machinery.—Kelsite Stone Products Co., H. G. Mitchell, Prest., 210 Seward Bldg., West Palm Beach, Fla.—\$10,000 mchy. for mfr. of blocks, brick, roofing and wall tile.

Cutting Machines, etc.—A. S. McRae, Secy., Mt. Gilead Garment Factory, Mt. Gilead, N. C.—Prices on cutting machines and other equipment for mfr. of men's shirts and overalls.

Engine.—Coleman-Shoemaker, Commercial Trust Bldg., Philadelphia Pa.—18 x 36 x 36 cross compound belted Corliss engine.

Engine (Fuel Oil).—Howard B. Johnson, 20 E. Jackson Blvd., Chicago, Ill.—150 H. P. Semi-Diesel fuel oil engine for electric operation.

sets, 4 valve or uniflow; turbines will be considered.

Engine.—W. A. Hadley, Stroud, Okla.—Prices on 120 H. P. used oil or gas engine, must be guaranteed as to conditions, etc.

Engine(Gasoline).—Carter & Carter, Garland, N. C.—Gasoline engine for broom making plant.

Engine Sets.—Howard B. Johnson, 20 E. Jackson Blvd., Chicago, Ill.—Two 500 K. W. 2,300 volts, 3 phase, 60 cycle Corliss engine

Fire Escape.—Tryon Graded School Commrs., Nelson Jackson, Jr., Secy. and Treas. Tryon, N. C.—Fire escape for school building; extend from 2nd floor to ground; stair type; about 4 ft. wide.

Generator.—Mansfield Light & Power Co., Mansfield, La.—250 or 300 K. V. A., 3 phase, 60 cycle, 2,300 volt, 3 bearing revolving field generator, not to exceed 60 R. P. M.

Generator(Oil or Gasoline).—Coleman-Shoemaker, Commercial Trust Bldg., Philadelphia, Pa.—100 K. W. oil or gasoline generator, 3 phase, 60 cycle, 440 volts; state location, description and price f. o. b. cars.

Gum or Veneer.—White Oak Corp., Box 1094, Knoxville, Tenn.—To contract for gum or other veneer suitable for basket work. quote per thousand pieces in following sizes: 1 piece 60-in. x $\frac{3}{4}$ x $\frac{1}{8}$, 2 pieces 60-in. x $\frac{1}{4}$ x $\frac{1}{8}$, and 20 pieces 36-in. x $2\frac{1}{2}$ x $1\frac{1}{16}$; purchase in carlots; delivery Knoxville.

Heating Plant.—Board of Awards, Wm. F. Broening, Prest., City Hall, Baltimore, Md.—Bids until Aug. 10 at office of Richard Gwinn, City Register, City Hall, for alterations and additions to heating equipment in Garrett Heights school, Aills Ave., Hamilton; drawings and specifications at office of J. F. Crowther, Inspector of Buildings, City Hall.

Heating Plant.—Bright Williamson, Prest.

Bank of Darlington, Darlington, S. C.—Plans and bids for installation of hot air heating system with ventilation for 2-story school building of 14 rooms.

Heating System.—Mississippi River Dredging Dist., Engr's Office, Box 1017, Memphis Tenn.—Bids until Aug. 18 to furnish and install a low pressure heating system in ware house building at U. D. dredge depot; information on application.

Heating System.—Dist. Comms., 509 Dist. Bldg., Washington, D. C.—Bids until Aug. 10 to furnish and install complete 2-pipe vacuum heating system in Psychopathic Branch of Gallinger Hospital, 19th and Massachusetts Ave., S. E.; for information apply to Room 427, Dist. Bldg.

Heating and Ventilating Systems.—Board of Awards, Wm. F. Broening, Prest., City Hall, Baltimore, Md.—Separate bids in duplicate until Aug. 10 at office of Richard Gwinn, City Register, City Hall for heating and ventilating system at Nos. 4, 25, 31, 33, 34, 35, 37, 39, 62, 63, 67, 72, 78, 80, 92, 108, Hillsdale and Highlandtown schools; drawings and specifications at office of J. F. Crowther, Inspector of Buildings, City Hall.

Jet Condenser.—Chas. A. McLean, 412 Citizens Bank Bldg., Norfolk, Va.—Jet condenser for use with 600 H. P. boilers; feed water from salt river.

Lath (Electric Welded Wire).—Chas. M. Allen Co., 407 Burwell Bldg., Knoxville, Tenn.—To correspond with mfrs. of electric welded wire lath covered with deadening felt, used as lath for plastering.

Laundry Equipment.—Shelby County Training & Industrial School, 225 Madison Ave., Memphis, Tenn.—Prices and data on complete laundry equipment for institution, having enrollment of 60 persons.

Laundry Equipment, etc.—Treasury Dept., Supvg. Archt.'s Office, Washington, D. C.—Bids until Aug. 30 to install complete mechanical equipment for 2 semi-ambulant quarters, laundry, refrigerating plant, sewage ejector and outside services at United States Public Health Service Hospital No. 63; Lake City, Fla.; plans on file or with Supt. at Lake City.

Laundry Equipment.—Prices and data on complete laundry equipment for institution capacity for 60 persons.

Lead (Pig).—Dist. Comms., 509 Dist. Bldg., Washington, D. C.—Bids until Aug. 11 to furnish 50,000 lbs. pig lead; information on application.

Levee Construction.—Mississippi River Dist., Box 401, Vicksburg, Miss.—Bids until Aug. 10, to construct 200,000 cu.yds. levee enlargement; information on application.

Levee Construction.—Board of Directors, Garland Levee Dist., Texarkana, Ark.—Bids until Aug. 12 to construct loop levee, containing 126,000 cu. yds. earth; C. S. Christian, Engr., 423 State National Bank Bldg.

Lifting Apparatus, etc.—Jules Houzoul, Brussels, Belgium.—Catalogs and data on lifting apparatus or cranes, hand power mchry., also mchry. controlled by electricity; with view to representation.

Lighting Fixtures.—Supvg. Archt.'s Office, Washington, D. C.—Bids until Aug. 12 to furnish, install and deliver lighting fixtures in U. S. Post Office, Court House and Custom House at Honolulu, T. H.; plans on file.

Lumber.—C. A. Rawlings, Builders' Exchange, Cincinnati, O.—Lumber for \$40,000 school building at Alexandria, Ky.

Machite Blocks.—Southern Building Material Co., Monticello Arcade Bldg., Norfolk,

Va.—Names and addresses mfrs. of machite blocks, also prices and samples.

Matchers.—John G. Duncan Co., Jackson & Central Sts., Knoxville, Tenn.—Dealers prices on new, rebuilt or secondhand high grade end matchers, to match ends of flooring.

Matcher for Flooring.—John G. Duncan Co., Jackson and Central Sts., Knoxville, Tenn.—Prices on rebuilt American or American style high grade or Taylor style end matcher for flooring, also dealers' prices on new one.

Mechanical Equipment.—Treasury Dept., Jas. A. Wetmore, Acting Supvg. Archt., Washington, D. C.—Bids until Aug. 17 for mechanical equipment of main hospital building, residence for officers in charge, nurses' quarters, attendants' quarters, laundry, garage and boiler house at U. S. Public Health Service Hospital, Tanners Creek, Norfolk, Va.; copies of drawings and specifications from Supt. of Constr. at Norfolk or from office of Supvg. Archt.

Metal Checks.—Kirpatrick & Son, Whitesburg, Tenn.—Names and addresses mfrs. of metal checks, etc., something like script to pay out instead of due bills.

Metal Enameling Plant.—A. P. Orrick, 628 Gravier St., New Orleans, La.—Metal enameling plant.

Mining Machinery.—F. B. Moodie, Mgr., Ohio-Kentucky Fluorspar & Lead Corp., City National Bank Bldg., Paducah, Ky.—Prices on mchry. to mine fluorspar and lead; daily capacity of mines 100 tons.

Miscellaneous Supplies.—State Board of Control, Purchasing Div., Austin, Tex.—Bids until Aug. 10 to furnish one or all state institutions with 6 or 12 months supplies including, drygoods, groceries, laundry supplies, glass and china ware, kitchen utensils, electrical and plumbing supplies, drugs, oil, etc.; information on application.

Paper Products.—Palm Beach Paper Co., S. E. Nichols, Prest., West Palm Beach, Fla.—Quotations and price lists from paper products mfrs., post cards, etc.

Paver.—Shaid Contracting Co., Elkins, W. Va.—Paver with boom and bucket; delivery preferably on rental basis.

Paving.—City, The Mayor, Alva, Okla.—Bids to pave streets and around Normal School; Benham & Mullergren, Conslt. Engrs., Kansas City, Mo.

Paving.—Jefferson County Board of Revenue, Birmingham, Ala.—Bids until Aug. 26 to resurface and repair south highway including resurfacing and repairing bitulithic, brick and asphalt streets; specifications with C. J. Rogers, County Highway Engr.

Paving.—City, J. C. Flanagan, Secy-Treas., Shreveport, La.—Bids to pave Centenary boulevard; bids opened Aug. 9; plans, etc., with City Engr.

Paving.—City, W. O. Crisman, Engr., Selma, Ala.—Bids until Aug. 29 to pave portion of Broad St.; brick, asphalt, asphaltic concrete, bitulithic or concrete; plans, etc., on file.

Paving.—City, R. W. Rigshy, City Mgr., Durham, N. C.—Bids until Aug. 30 to construct pavements: minimum 45,000 sq. yds.; maximum 70,000 sq. yds.; plans, etc., with City Engr.

Paving.—City, J. Frank Brannen, Clk., Benwood, W. Va.—Bids until Aug. 27 to construct 2,400 sq. yds. paving on Marshall St.; plans, etc., with C. C. Smith, Civil Engr., 77 12th St., Bates Bldg., Wheeling, W. Va.

Paving.—Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids to grade, curb and pave streets listed in Contracts Nos. 192 OC-NA, 193 OA-OC, 194 OC, and 195 OA; 19,660 sq. yds. sheet asphalt; 3,400 sq. yds. vertical fiber vitrified block; 10,400 sq. yds. granite block repaving, etc.; bids opened Aug. 10; specifications, etc., on file at 214 E. Lexington St.

Paving.—Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids to grade and pave alleys listed in Private Alley Contract No. 73; cement concrete; specifications, etc., on file.

Pipe (Black Iron), etc.—G. J. Adams, 8 Wall St., Norwalk, Conn.—12,000 ft. 1½ and 2-in. black iron pipe, second hand, straight with good threads and couplings, no pieces accepted under 10 ft.; 500 ft. 5-in. cast iron B. & S. water pipe, 200 ft. 48-in. Penstock.

Pipe (Terra Cotta).—Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids opened Aug. 10 to furnish terra cotta pipe to Highways Engr. Dept.; specifications, etc., A. E. Christhill, Highways Engr.

Pistons.—M. W. Smith, Box 388, Gainesville, Fla.—To correspond with mfrs. of pistons finished for all makes of auto engines, commercial and pleasure cars.

Planing Mill Machinery.—Harris Hardwood Co., Geo. L. Wade, Mgr., Box 950, Roanoke, Va.—Planing mill mchry., \$40,000.

Portable Steel Garages.—W. H. Beardsly, Box 422, Charlotte, N. C.—Names and addresses mfrs. of portable steel garage buildings for individual use.

Power Press.—A. P. Orrick, 628 Gravier St., New Orleans, La.—Power plant and dies for the mfrs. of automobile license plates, name, door and advertising plates of various kinds.

Rings (Cylinder).—M. V. Smith, Box 388, Gainesville, Fla.—To correspond with mfrs. of cylinder rings.

Road Building Machinery.—Box 572, Raleigh, N. C.—Complete line of road building mchry. for North Carolina; commission basis.

Road Construction.—Wood County, Cathey, County Judge, Quitman, Tex.—Bids on concrete and steel drainage structures and backfilling on 14.49 mi. Jim Hogg highway between Quitman and Winnsboro; bids opened Aug. 9; John E. Blair, Engr., Mineola, Tex.

Road Construction.—Troup County, J. H. Hardy, Chrmn. Comms. Roads and Revenues, LaGrange, Ga.—Bids until Aug. 23 to construct 6.61 mi. top-soil road on State Route No. 1, known as LaGrange-Chipley road; State Aid Project S 46; plans, etc., on file with State Highway Engr., Walton Bldg., Atlanta, Ga., and Joe W. Hawkins, Div. Engr., Newnan, Ga.

Road Construction.—Kershaw County Comms., Camden, S. C.—Bids until Aug. 15 to construct 11 mi. Camden-Lancaster road; 20,000 yds. sand-clay surfacing; plans, etc., with J. D. Gregory, County Engr.

Road Construction.—Blount County, Thos. L. Nichols, Chrmn. Good Roads Comsn., Maryville, Tenn.—Bids until Aug. 15 to improve, grade and macadamize 22 mi. grade and 34 mi. macadam; \$250,000 available; D. W. Harmon, Engr.

Road Construction.—Limestone County, H. F. Kirby, County Judge, Groesbeck, Tex.—Bids to construct additional gravel and rock surfacing on Highway No. 7; 3,846.7

cu. yds gravel and 4,798.3 cu. yds. rock surfacing; material furnished by county; Fred P. Holt, County Engr.

Road Construction.—State Highway Dept. Jackson, Miss.—Bids until Aug. 12 to construct 7 mi. road in Itawamba County; concrete surface.

Road Construction.—State Highway Dept. Jackson, Miss.—Bids until Aug. 16 to grave surface 7 mi. road in Pearl River County.

Road Construction.—State Highway Dept. Jackson, Miss.—Bids to concrete surface road in Sunflower County; bids opened Aug. 10.

Road Construction.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids to construct 5 mi. Leesville-Many highway; 5 mi. Leesville-Alexandria, 5 mi. Leesville-DeRidder and 5 mi. Leesville-Texas Highways; Vernon Parish; bids opened Aug. 8; Duncan Buie, State Highway Engr.

Road Construction.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids to construct 3.05 mi. Bossier City-Coushatta highway, Bossier Parish; Duncan Buie, State Highway Engr.

Road Construction.—State Highway Dept. Jackson, Miss.—Bids to concrete surface 10 mi. road in Washington County; bids opened Aug. 9.

Road Paver.—Eagle Engineering Co., New Bern, N. C.—No. 14 E paver, consider second-hand equipment.

Rolling Partitions.—L. C. Fallin, Plant City, Fla.—Rolling partitions for number o residences at Clearwater, Fla.

Road Roller.—Eagle Engineering Co., New Bern, N. C.—10 ton road roller; consider second-hand equipment.

Sewer Construction.—City of St. Augustine, Fla., E. Martins, Mgr.—Invites bids on material for construction of sewers; G. T. Butler, Engr.

Sewer Construction.—State Normal School Elizabeth City, N. C.—Invites bids on construction of sewer system; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

Sewing Machines.—A. S. McRae, Secy., Mt. Gilead Garment Factory, Mt. Gilead, N. C.—Bids until Sept. 1 on sewing machines for mfrs. of men's shirts and overalls.

Stokers.—Dept. of Interior, F. M. Goodwin, Asst. Secy., Washington, D. C.—Bids until Aug. 18 to install 4 sets of stokers at central power plant at Freedmen's Hospital, Washington; plans on file.

Street Improvements.—City, The Mayor, Ulvade, Texas.—Bids until Aug. 12 to scarify, reshape and roll 180,000 sq. yds. gravel street; further information from City Engr.

Surfacing.—Nueces County, F. A. Tompkins, County Auditor, Corpus Christi, Tex.—Bids to surface causeway; 17,119 sq. yds. bituminous surfacing, 1½ in. thickness on timber deck and 1,478 sq. yds. bituminous macadam on shell fill; bids opened Aug. 8; plans, etc., with O. N. Powell, County Engr.

Tank and Tower.—John T. Willis, Jackson, Miss.—50,000 gal. steel water service tank and tower 75 ft. high; built according to mfrs. plans and specifications.

Terminal Construction.—M. A. Long Co., Munsey Bldg., Baltimore, Md.—Bids until Aug. 10 on construction of terminals for Rainbow Lines, Connellsville, Pa. Howard C. Frank, Archt.

Tile.—L. C. Fallin, Plant City, Fla.—See Building Material.

Ventilators.—L. C. Fallin, Plant City, Fla.

—Ventilators for residences at Clearwater, Fla.

Waterworks.—Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids until Aug. 24 to construct balancing reservoir, surg tank and closing shaft 13, Contract No. 51, Water Department; earth dam, sinking 2 shafts 12 ft. in diameter about 30 ft. deep, etc.; 14,000 cu. yds. rolled earth embankment; 2,400 cu. yds. rock excavation; plans, etc., on file.

Waterworks.—State Normal School, Elizabeth City, N. C.—Invites bids on installation of water works; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

Waterworks.—F. A. Baldinger, Mayor of Magnolia Park, Tex.—Bids until Aug. 10 to construct deep well complete with deep well centrifugal pump and electric motor; plans with E. E. Sands, Const. Engr., 421 Mason Bldg.

Waterworks.—City Commrs., Tulsa, Okla.—Bids until Aug. 18 to extend waterworks; \$86,373; daily capacity 4,000,000 gals.; erect 52 ft. brick, filter house addition, \$7,000; install equipment for four filters; 12MGD pump, piping; construct concrete settling basin, inside dimensions 10½x180 ft. x 13-15 ft. depth, \$40,000; Holway Engineering Co., Engr., 332 Atco Bldg.

Waterwheel.—Elwyn N. Moses, Kawanee Lodge, Fort Pierce, Fla.—Modern overshot water wheel used in developing small power plant.

Wheels.—W. H. Love, Box 786, Greensboro, N. C.—To correspond with mfrs. of 3-in. steel wheels, also wooden wheels with castor parts in lacquered brass; also prices and catalogs on same.

Wire Glass.—L. C. Fallin, Plant City, Fla.—See Building Material.

Wrapping Paper.—Lorick & Lowrance, Columbia, S. C.—Prices on wrapping paper for jobbing trade.

Financial News

New Financial Corporations.

Fla., Mayo — Mayo State Bank, capital \$17,500 inceptd., with J. M. Gornato, Prest; H. G. Fannin, Cashier.

Fla., Sarasota — Sarasota Guarantee Abstract Co., capital \$15,000 inceptd., with A. B. Edwards, Prest; A. J. Beck, Secy.

Fla., Wauchula—Hardee County Abstract Co., capital \$50,000 inceptd., with J. L. Jones, Prest; H. R. Morley, Secy-Treas.

Md., Baltimore — Charny Post Building Assn., 208 Title Bldg., capital \$390,000, inceptd. by Frank J. Powers, Edward T. Lumpkin.

N. C., Draper—Draper Insurance & Realty Co., capital \$5,000, inceptd. by James T. Smith, S. H. Marshall.

Okla., Sapulpa — Sapulpa Investment Co., capital \$7,500, inceptd. by James O. Wilson, Sapulpa; J. C. Bollinger, Kiefer, Okla.

S. C., Spartanburg—Spartanburg Bond & Mortgage Co., capital \$100,000, inceptd., with Chester D. Ward, Prest.-Treas.; L. K. Brice, Asst. Treas.

Tenn., Knoxville—American National Bank, consolidation of Knox County Bank and Trust Co. and American National Bank, organized with capital and surplus \$200,000.

Tenn., LaFollette—Campbell County Bank &

Trust Co., capital \$25,000, inceptd. by Winston Baird, Prest., Jacksboro, Tenn.; R. L. Gallaher, V. P., Caryville, Tenn.

Tenn., Oliver Springs—Tri-County National Bank, capital \$25,000 organized with Samuel Tunnell, Prest; R. L. Haffington, Cashier.

Tex., Cuero—Cuero Building & Loan Assn., capital \$500,000, inceptd., by V. J. Grunder, J. J. Fisher.

Tex., Dallas—Hobby Investment Co., capital \$300,000, organized with Edwin Hobby, Prest.; O. W. Shaw, Secy.-Treas. (Lately noted inceptd., capital \$300,000.)

Tex., Dallas—Home Trust & Savings Bank of Oak Cliff, capital \$100,000 will organize with Hugh W. Ferguson, Jos. Collins and others

Tex., Farwell—Farwell National Bank, capital \$25,000 will organize.

Tex., Fort Worth—Continental National Bank, capital \$750,000 organized with J. G. Wilkinson, Prest.; Ed H. Winton, Cashier.

Tex., Fort Worth—Continental National Bank, capital \$750,000, inceptd., with J. G. Wilkinson, Prest.; A. E. Thomas, Vice-Pres.

Tex., Houston—State Building Investment Assn., capital \$3,000,000 inceptd. by H. M. Williams, W. L. Dennis.

Tex., Houston—Southwestern Finance Corp., capital \$10,000 inceptd., by C. C. Young, I. W. Clark.

Tex., Lamesa—Dawson County Loan Co., capital \$20,000, inceptd. by C. C. Koger, W. P. Baker.

Tex., Nocona—Co-Operative Savings, Investment & Loan Assn., capital \$25,000, inceptd., by P. J. Phelps, Thomas C. Tripp.

New Securities.

Ala., Bessemer—Road and School—City sold \$105,000 road bonds to Sullivan, Long & Hagerty, Bessemer and \$100,000 school bonds to First National Bank.

Ala., Birmingham—Road—Jefferson County sold \$6,000 bonds to Alabama-Hart-Par Co. and \$102,000 to City of Bessemer; 5 per-cent 11 yr., dated April 1, 1921; D. C. Ball, Prest. Board of Revenue. (Lately noted inviting bids.)

Ala., Livingston—Road and Bridge—Sumter County sold \$75,000 of 5 per-cent road and bridge bonds to Brandon, Gordon & Waddell, New York.

Fla., Dunedin—Public Improvement—Town will receive bids until Aug. 30 on \$39,000 of 6 per-cent 20-year public improvement bonds; Percy D. Niven, Town Clk.

Ga., Glennville—School—Trustees of Glennville School Dist. will receive bids until Sept. 1 on \$30,000 of 6 per-cent semi-annual 10-20-30-yr. school bonds. Address C. L. Cowart.

Ga., Rome—Road—Floyd County will receive bids until Aug. 15 on \$203,000 of 5 per-cent 15-yr. road bonds; J. R. Centrell, Auditor. (Lately noted receiving bids July 28.)

Ky., Ashland—Water—City will receive bids until Aug. 17 on \$160,000 5% per-cent, semi-annual \$1,000 denomination water works improvements bonds, dated Jan. 15, 1921; W. A. Manning, City Clk. (Lately noted.)

Ky., Frankfort—Bridge—City and Franklin County may vote in November on \$350,000 bridge bonds. Address the Mayor and Franklin County Commrs., Frankfort, Ky.

Ky., Paintsville—Bridge — Johnson County sold bridge bonds. Address County Commrs.



Nine Miles of U. S. Cast Iron Pipe

Doubling the Water Supply of Asheville, N. C.

Important not because it is a record installation, but because of the difficulties overcome. The line passes over rough and mountainous country and the pipe had to be hauled in wagons as far as possible and dragged the rest of the way. There must be no chance of having to repeat the work, the line must be permanent. This consideration limited the choice to Cast Iron Pipe.

Nor was the trench itself straight. It wound over the hills, into the valleys and out again in long gentle curves. Flexible Bell and Spigot joints met these conditions, the pipe was laid practically without specials.

The work was done under the personal supervision of R. J. Sherrill, Commissioner of Public Works, by Kelly & Wilson, contractors and the City of Asheville is justly proud of the new water main.

*Write for folder, "Cast Iron Conduits
for Albany Water Works Wanted—"*

United States Cast Iron Pipe and Foundry Co.

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Pittsburgh—Henry W. Oliver Bldg.	St. Louis—Security Building	Minneapolis—Plymouth Building
Dallas, Texas—Scollard Building		Buffalo—657 E. Ferry St.

For quotations or estimates, apply to nearest sales office

La., Amite—Road—Tangipahoa Parish sold \$325,000 of Road Dist. No. 1 bonds to W. L. Slayton & Co., Toledo, O. (Lately noted inviting bids.)

La., New Iberia—Road—Iberia Parish will receive bids until Aug. 17 on \$485,000 road bonds including \$150,000 Road Dist. No. 1, \$33,000 Road Dist. No. 3, \$47,000 Road Dist. No. 5, \$110,000 Road Dist. No. 6, and \$145,000 Road Dist. No. 8 bonds; Paul Bassin, Secy. Police Jury.

La., Ruston—Road—Lincoln Parish, S. J. Heard, Prest. Police Jury, will receive bids until Aug. 29 on \$700,000 of 5 per cent. semi-annual road bonds.

Md., Annapolis—Road and Bridge—Board Public Works of Maryland purchased \$500,000 of 4½ per cent semi-annual Construction Loan of 1920 also \$100,000 of 4½ per cent semi-annual Bridge Loan of 1920; Albert C. Ritchie, Governor. (Lately noted inviting bids.)

Miss., Fulton—School—Fulton Rural School Dist. receives bids Aug. 5 on \$5,000 of 6 per cent \$500 denomination school bonds, dated Aug. 1, 1921; G. W. Gilliland, Chancery Clk.

Miss., Meridian—Street—City may vote on \$100,000 paving bonds; W. H. White, City Clk.

Miss., Noxapater—School—Town receives bids Aug. 6 on \$12,000 Separate School Dist. bonds; J. M. Harris, Mayor. (Lately noted to vote.)

Miss., Pittsboro—Road—Calhoun County voted \$50,000 road bonds. Address County Commrs.

Mo., Barnard—Water—City voted water bonds. Address the Mayor.

Mo., Jefferson City—General Assembly passed bill providing for \$60,000,000 bond issue; issued \$10,000,000 in 1923 and \$5,000,000 annually thereafter; A. B. Hyde, Governor.

Mo., Maryville—Drainage—National Bank of Commerce, St. Louis, is offering \$135,000 6 per cent serial, \$1,000 denomination Barnard Bolcow Drainage Bonds, of Andrew and Nodaway Counties; due serially 1923 through 1941.

Mo., St. Charles—Road—St. Charles County sold \$200,000 of 5 per cent road bonds to, St. Charles Savings Bank, at 95.23.

Mo., St. Charles—Road—St. Charles County received bids Aug. 1 on \$200,000 of 5 per cent \$1,000 denomination road bonds, dated Aug. 1, 1921; Herbert C. Sandfort, Clk. County Court.

N. C., Aurora—Street—Town receives bids Aug. 9 on \$25,000 of 6 per cent semi-annual \$1,000 denomination street bonds, dated July 1, 1921; W. H. Hooker, Mayor.

N. C., Burlington—Street—City sold \$275,000 6 per cent, semi-annual \$1,000 denomination street improvements bonds to A. B. Leach & Co., Inc., N. Y. (Lately noted inviting bids.)

N. C., Gatesville—School—Gates County Board of Education will receive bids until Sept. 5 on \$15,000 of 6 per cent semi-annual Eure School Dist. bonds, dated Sept. 1, 1921; \$30,000 of 6 per cent 20-yr. Hobbsville School Dist. bonds, dated Sept. 1, 1921; J. M. Glenn, Secy.

N. C., Kernersville—School—Forsyth County, Kernersville School District will vote Sep. 6 on \$25,000 school bonds; Leon Cash, Chrmn. Commrs.

N. C., Lexington—Water and Light—Town will issue \$50,000 water and light bonds; Paul R. Raper, Clk. Commrs.

N. C., Lexington—Road—Town will issue \$200,000 road bonds; Paul R. Raper, Clk. Commrs.

N. C., Rich Square—School—Northampton County, Rich Square School Dist. will receive bids until Sept. 1 on \$35,000 of 6 per cent semi-annual \$1000 denomination school bonds, dated Sept. 1, 1921; A. J. Conner, Chrmn. Trustees. (Lately noted voted.)

N. C., Rockingham—Courthouse—Richmond County, B. F. Reynolds, Chrmn. Commrs., will receive bids until Aug. 31 on \$200,000 of 6 per cent semi-annual 1 to 30-yr. serial or 30-yr. courthouse bonds.

N. C., Wentworth—Road—Buckingham County sold \$300,000 of 6 per cent semi-annual \$5,000 denomination road bonds, dated July 1, 1921, to Hornblower & Weeks, New York.

N. C., Winston-Salem—Sewer, Water and Street—City sold \$350,000 of 6 per cent semi-annual \$1,000 denomination street, water and sewer bonds, dated July 15, 1921, to Wachovia Bank & Trust Co. at par with accrued interest; W. H. Holcomb, Clk. (Lately noted inviting bids.)

Okla., Tulsa—Garbage Disposal Plant—City will receive bids until Aug. 19 on \$50,000 of 5½ per cent semi-annual \$1,000 denomination garbage disposal plant bonds; Mrs. Frank Seaman, City Auditor.

Okla., Tulsa—Water—City will receive bids until Aug. 18 on \$200,000 of 5½ per cent semi-annual \$1,000 denomination water bonds; Mrs. Frank Seaman, City Auditor.

S. C., Abbeville—School—Board of Trustees receive bids Aug. 10 on \$100,000 of 6 per cent 20-yr. school bonds, dated July 1, 1921; W. M. Barnwell, Chrmn. (Lately noted receiving bids July 28.)

S. C., Hartsville—Street—Town will vote Aug. 25 on \$110,000 street and sidewalks.

S. C., Hartsville—Street, Railroad, Sewer and Water—Town will issue \$15,000 railroad aid, \$51,000 water, \$24,000 sewer and \$110,000 street bonds. Address The Mayor.

S. C., Williston—Electric and Water—Town receives bids Aug. 10 on \$7,000 electric and \$23,000 water bonds; 6 per cent semi-annual \$1,000 denomination; C. L. Smith, Clk.

Tenn., Blountville—Road—Sullivan County will receive bids until Aug. 13 on \$45,000 of five per cent road bonds; W. D. Lyon, Chrmn. Road Commrs, Blue City, Tenn.

Tenn., Cleveland—School—Bradley County sold \$95,000 6 per cent \$1,000 denomination school bonds to Kaufman, Smith & Co.

Tenn., Jonesboro—Road—Washington County sold \$366,000 of 5 per cent road bonds to, Freeman & Co., at par and accrued interest. R. Haut, Ch. Clk., County Commrs., Towson, Md.—Bids until Aug. 11 to improve section Dulaney's Valley pike with concrete, 1.15 mi.; improve 4 mi. Middle River road with concrete and macadam German Hill road, 1,500 ft.; plans, etc., with Henry G. Shirley, Roads Engr.

Tenn., Memphis—Hospital, Water and River Terminal—City will sell \$100,000 of 6 per cent serial hospital bonds, dated July 1, 1921; \$200,000 of 6 per cent water and \$175,000 of 5½ per cent river terminal and warehouse bonds. Address The Mayor.

Tenn., Pulaski—Water—City will vote Aug. 29 on \$40,000 water bonds. Address The Mayor.

Tex., Albany—Water—City may vote in August on \$100,000 water bonds to increase water supply. Address The Mayor.

Tex., Ballinger—Runnels County Rural Dist. No. 2 registered \$40,000 of 5½ per cent bonds State Comptroller.

Tex., Benjamin—School—Knox County Com-

mon School Dist. No. 7 registered \$12,000 of 6 per cent serial school bonds with State Comptroller.

Tex., Canadian—Road—Hemphill County will vote in September on \$50,000 bonds; J. E. Stephens, County Judge. (Lately noted.)

Tex., Colorado—Water, etc.—City votes Aug. 2 on \$85,000 water and \$35,000 sewer bonds. Address the Mayor.

Tex., Crowell—Water—City voted \$100,000 water bonds. Address The Mayor.

Tex., Fort Davis—Road—Jeff Davis County Special Road Dist. registered \$96,000 of 5½ per cent serial road bonds on July 21, with State Comptroller.

Tex., Fort Worth—School—Riverside Independent School Dist. voted \$65,000 school bonds. Address Board of Education.

Tex., Gladewater—School—Board of Education voted \$25,000 school bonds.

Tex., Highland Park (P. O. Dallas)—Bridges and Road—City voted \$100,000 road and bridge bonds; M. Costello, Member City Council. (Lately noted to vote.)

Va., Alexandria—Street—E. F. Ticer, Chrmn. Finance Committee, will receive bids until Aug. 11 on \$300,000 of 6 per cent semi-annual 19½ yr. street bonds and general fund coupon bonds.

W. Va., Bluefield—School—Board of Education will sell \$192,000 school bonds, recently voted.

W. Va., Bridgeport—School—Bridgeport Independent School Dist. sold \$30,000 6 per cent bonds to Bridgeport Bank; A. B. Teter, Secy. (Lately noted.)

Railways.

S. C., McClellanville—Plans to build a railroad from Jamestown to McClellanville, about 25 mi., are reported being made by the Johnson Greenleaf Lumber Company of Norfolk, Va. John H. Graham, of McClellanville, may also be able to give information.

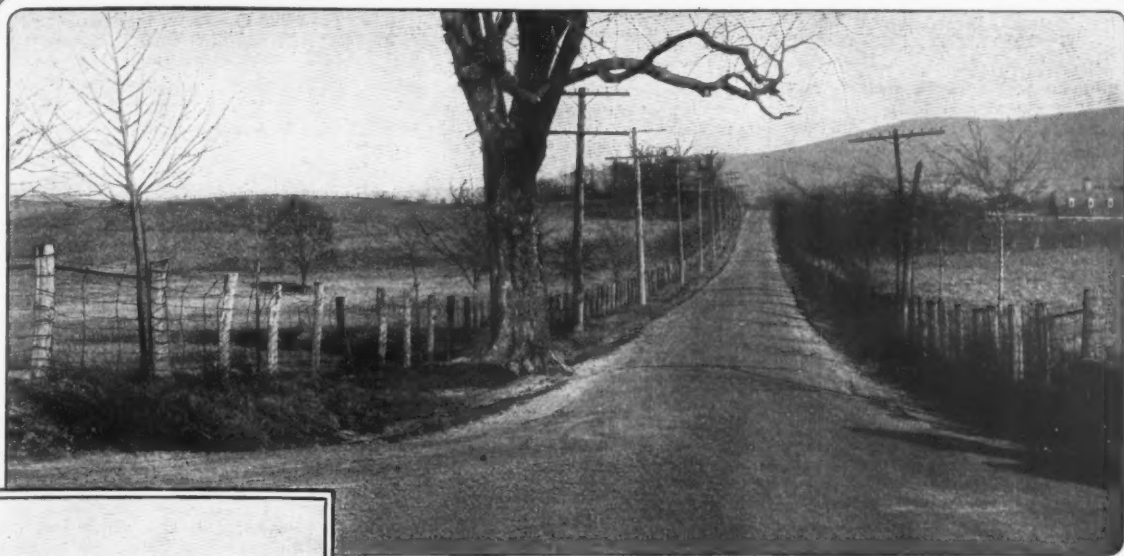
Trade Literature.

Clean Up and Paint Up.

The National Clean Up and Paint Up Campaign Bureau, Pontiac Building, St. Louis, has issued an attractive Blue Book describing and illustrating results of its activities. It says that more than 7,000 cities and towns have heeded the cry for cleanliness and fresh paint, making municipalities and homes beautiful, sanitary, and safe, the chances for spread of disease, fire, etc., being practically removed. The book, which contains many fine pictures, is accompanied by large folders, circulars, etc., giving more particulars.

Two Valuable Text-Books.

Two new books, just issued by the Haynes Stellite Company, admirably satisfy the demand for authentic information and specific facts concerning the advantages of Stellite tools for cutting in everyday production. They are text-books in convenient pocket size and contain valuable information never before published about a new method of obtaining increased speed, the latest advances in machine tool practice, heat charts, tables, complete data and exceptionally fine illustrations. Copies of these books may be obtained without charge from the company at 30 East 42nd St., New York City.



Hopwood to Brownfield Road, Fayette Co., Pa., built with "Tarvia-X" penetration method in 1917.

A substantial Slag Road built with Tarvia —

The photographs show two sections of the Hopwood to Brownfield Road, South Union Township, Fayette County, Pa.

This road was built over an old water-bound base by the Township Supervisors with their own forces. A five-inch course of Dunbar Bank slag was used as road metal. The slag was bound with "Tarvia-X" applied by the penetration method. A deferred "Tarvia-B" seal coat was applied two months after completion.

This is now a mighty fine piece of road that is proof against heavy traffic. With occasional

Tarvia maintenance, it ought to last for many years forming a mudless, dustless, automobile-proof highway, of which any community might well be proud.

This is just another example of the fact that no matter what sort of a road problem town or highway officials encounter, they can turn to Tarvia with the comfortable knowledge that there is a grade and a method of application of this versatile coal-tar preparation to help them out.

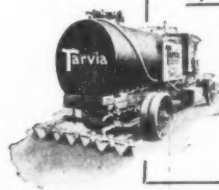
Illustrated booklets, describing the various Tarvia treatments, sent free upon request.



Tarvia makes hill-roads waterproof and prevents the surface from washing away.

Tarvia

*For Road Construction
Repair and Maintenance*



Special Service Department

This company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by anyone interested. If you will write to the nearest office regarding road problems and conditions in your vicinity, the matter will be given prompt attention.

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland	Cincinnati	Pittsburgh
Detroit	New Orleans	Birmingham	Kansas City	Minneapolis	Dallas	Nashville	Syracuse
Salt Lake City	Seattle	Proctor	Atlanta	Duluth	Milwaukee	Bangor	Washington
Johnstown	Lebanon	Youngstown	Toledo	Columbus	Richmond	Lafayette	Bethlehem
Elizabethtown	Buffalo	Baltimore	Omaha	Jacksonville	Houston	Denver	

THE BARRETT COMPANY, Limited Montreal Toronto Winnipeg Vancouver St. John, N. B. Halifax N. S.

The *Barrett* Company

Trade Literature.

Electric Buffers and Grinders.

The Valley Electric Company, 3157 South Kingshighway, St. Louis, Mo., have just completed developments and are making deliveries on a complete line of portable electric buffers and grinders, a brief description of which, (with illustrations), is given in a new circular and reduced price list. This new type of machine is a product made from standard parts of the Valley power motor and it will be of much interest in electric, machinery, and automotive industries.

Motors, Hoists, Etc.

The 25th catalogue issued by the Dake Engine Company, founders and machinists, Grand Haven, Michigan, presents complete information accompanied by clear and accurate pictures concerning the Dake air and steam motors, pneumatic hoists, contractors' hoists, crane hoists, hoisting engines, swinging engines, motor crabs, electric hoists, steam steering gears, spud hoists, gangplank hoists, capstan windlasses, fish net lifters, etc. The book is very comprehensive and the tables of specifications, etc., will be found exceedingly useful.

Portable Pneumatic Hoist.

The "Waughoist," a portable compressed air hoist with rotary engine is most attractively and instructively described and illustrated in a booklet issued by the Denver Rock Drill Manufacturing Co., Denver, Colorado. This device, whose greatest dimension is only 24½ inches and weight only 335 pounds, so that it may be readily moved about, is used for various purposes, such as loading freight cars, mining operations, building work, sinking shafts, and for different types of contractors' work, besides work in foundries and other industries.

Road Machinery.

Catalog F of the Austin Manufacturing Company, Chicago, is devoted to picturing and describing the several types of Austin road rollers operated by either kerosene or steam motors. Road scarifiers also come in for consideration and illustration. Many of the pictures display the Austin machines at work on different kinds of roads and streets, while other cuts show them as they appear ready for use. Complete descriptions of the salient features of this road machinery are accompanied by pictures of different parts for the information of the reader. The cover of the catalog is done in colors and is very handsome.

New Model Transit and Level.

A new pamphlet "Sterling's Transits & Levels" which has been issued by the Warren-Knight Company, makers of surveying instruments, etc., 136 North 12th St., Philadelphia, Pa., contains on pages 12 and 13 an illustration and description of their new model No. 1-C Sterling precision transit with new type interchangeable auxiliary telescope, adapting the instrument especially for mine, tunnel and vertical shaft work. Pages 14 and 15 carry illustration and description of their new Model No. 16-M Sterling engineers wye level with reflecting mirror. Other products of the company are also handsomely illustrated and fully described in this booklet.

Sand Blast Machinery.

The May number of "Pax-on-Ward," issued by the J. W. Paxson Co., Philadelphia, manufacturers of Paxson sand blast machines, dry process dust collectors, etc., presents their merits by means of pictures and descriptions. It is a very interesting issue.

A New Business Periodical.

"The Dart" is a breezy little magazine issued by the Medart Patent Pulley Co., Inc., of St. Louis, and edited by F. E. Chandler. The first issue is for June, 1921, and the contents, it is hoped, will interest men connected with power using plants and others all of whose names are desired. The Medart pulleys range in size from 8 inches diameter and 3 inches face to 15 feet diameter and 50 inches face.

Scoop Body for Trucks.

The Easton scoop body for Ford trucks is the subject of Bulletin 32 issued by the Easton Car & Construction Co., 50 Church St., New York. This new product is a simple all-steel self-dumping body specially designed for the particular type of truck mentioned and it is said can be attached or detached in 10 minutes. It is used by road builders, and industrial plants; also in coal yards, quarries, sand banks, gravel pits, clay banks, etc. It is particularly adapted to hand loading. Illustrations display the method of operation and there are tables of sizes and weights.

Dipper Dredges for the Heaviest Work.

Dipper dredges for river, harbor and canal excavation, including the greatest used on the Panama Canal, are described and illustrated in Bulletin R-1 issued by the Bucyrus Company, South Milwaukee, Wisconsin. The first Bucyrus dredge was built in 1883 and the company has manufactured for many years high powered heavy dipper dredges, their specialty being to adapt machinery to the heaviest and most difficult work. The bulletin is copiously and handsomely illustrated showing dredges at work in various places, the pictures having appropriate reading matter accompanying them.

Exhibition Plan for Manufacturers.

The Manufacturers Exhibition Company, Incorporated, 45 West 18th Street, New York, have issued a pamphlet presenting the advantages of their permanent exhibition building located on Sixth Avenue, 18th and 19th streets, and which was formerly known as the Greenhut Building. Each of its several floors has about 85,000 square feet of floor space laid out in sections of different sizes from 150 square feet up. A floor plan is included as being of value to manufacturers and others who wish to display their products in connection with their New York branches.

Road Maintenance.

"Road Maintenance with Tarvia" is a new booklet issued by the Barrett Company of New York and other cities and just off the press. The purpose of this publication is to show the various methods of maintaining pavements and it also describes and illustrates the steps necessary for patching every kind of road, the instructions being so clear and accurate that by following the directions one

cannot fail to obtain satisfactory results. The booklet contains very many fine pictures large and small, showing roads built with Tarvia and their condition after long use.

A Valuable Plant Publication.

The Marion Excavator, a monthly plant newspaper of the employees of the Marion Steam Shovel Company, Marion, Ohio, publication of which was begun during the winter, has progressed to its fourth number, which displays decided advancement and interest. Besides containing much that is instructive, the paper also presents personal and intimate news concerning the plant and its employees, illustrations being employed to advantage in several articles. The second issue of the paper has a likeness of President Harding on the first page. A couple of fine articles on the evolution of the steam shovel have already appeared.

All About Concrete.

"Concrete: Its Manufacture and Use," is a 200 page book which may be carried in the pocket, yet it covers the subject of concrete most thoroughly. It is published by the Koehring Company, Milwaukee, Wisconsin, and it is copyrighted. The information presented in this small volume is complete in detail, from the selection and testing of materials to the completion of construction. There are thirty valuable tables, which will be appreciated by everyone interested, besides several diagrams and illustrations. The book is substantially bound. The Koehring Company are manufacturers of the widely used pavers and mixers that bear their name.

Generators, Engines, Pumps.

A new bulletin, No. 1117, issued by the Allis-Chalmers Manufacturing Co., Milwaukee, Wis., relates to small generating sets and ABC steam engines. These sets, it is stated, are particularly suitable for isolated lighting and power plants, exciter units in power plants, shipboard service, construction work, etc. The bulletin is appropriately and finely illustrated and also contains tabular data of value. Leaflet No. 2056, from the same company, describes and illustrates centrifugal pumps for ice and refrigerating plants, several of the pictures displaying installations in the South.

A new general catalogue, "E 23" issued by Albert Pick & Company, Chicago, is indicative of the attitude of that firm towards business and business conditions today. They have increased the size of the book about one-third, expanding practically all of their lines of merchandise at revised prices. The catalogue is bountifully illustrated throughout, the pictures being accompanied by complete descriptions of the various items of furnishings, equipment and supplies which they distribute to hotels, clubs, boarding houses, apartment buildings, office buildings, restaurants, lunch rooms, cafeterias, etc. The organization specializes in lunch room and domestic science equipment for schools and colleges, hospitals and various institutions. Steamers and other vessels are also supplied along this general line. There are nearly 400 pages in the book.

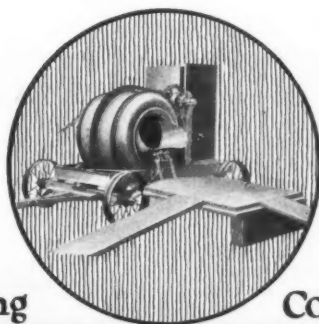


Three Seasons' Mixing Repairs, \$23

W. L. Eby, Contractor, of Oklahoma City, used his Lakewood-Milwaukee Low-Charge Mixer 300 days continuously the first year—250 days the second. The third year he used it to mix concrete on the Exposition Building for the Oklahoma State Fair. Repair cost, \$23.

Lakewood-Milwaukee small mixers stand up under hard, continuous service. They're worth more.

Bulletin 21-D shows why.



The Lakewood Engineering

Company, Cleveland U.S.A.



CONDENSITE CELORON SILENT GEARS

Every industry may now have silent gears—gears that are water, oil and greaseproof—self-supporting, vulcanized fibre gears that require no shrouds or end plates—tough, strong, waterproof, vulcanized fibre gears that will give service in places and under conditions where the average silent gear could not survive.

Condensite Celoron gears will stand up and give service under most trying conditions because they are almost as strong as cast iron and far more resilient. Equal to sudden shock or heavy strain. They save money too, because they save power, make a more quiet plant, better working conditions, more contented workmen and speed up production generally.

Most all good gear cutters can supply you with Condensite Celoron gears or pinions. Or, we will gladly send you the names of gear cutters in your neighborhood who will be glad to help you. Write us today.

Diamond State Fibre Company
BRIDGEPORT (near Philadelphia) PA.

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EUROPE

Plymouth, Boulogne, London

From New York

August 16—Old N. State (159).

September 6—Centennial S. (159).

September 20—Old N. State (159).

Bremen and Danzig

From New York

August 20—Hudson (159).

August 30—Hudson (159).

September 10—Prin. Matoika (159).

September 22—Potomac (159).

Naples and Genoa

From New York and Boston

Pocahontas (159).

Plymouth-Cherbourg and Bremen

From New York

August 27—America (159).

September 3—G. Washington (159).

September 28—America (159).

SOUTH AMERICA

Rio de Janeiro, Montevideo and Buenos Aires

From New York

August 17—Aeolus (91).

FAR EAST

Manila, Singapore, Colombo, Calcutta

From San Francisco

August 13—Creole State (105).

Yokohama, Kobe, Shanghai, Hongkong, Manila

From Seattle

August 27—Wenatchee (1).

September 17—Silver State (1).

October 8—Keystone State (1).

November 5—Wenatchee (1).

November 26—Silver State (1).

From San Francisco

August 6—Golden State (105).

COASTWISE AND HAWAII

Port Los Angeles, San Francisco and Hawaiian Islands

From Baltimore

September 3—Hawk. State (80).

1 The Admiral Line,

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80 Matson Navigation Co.,

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91 Munson, Steamship Lines,

97 Wall, N. Y. B. G'n. 3300.

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105 Pacific Mail Steamship Co.,

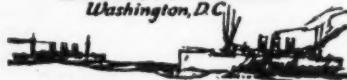
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INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

In New Quarters.

The O. J. Morris Ice & Cold Storage Building Company, Inc., of New Orleans, have occupied their new quarters at 416 Carondelet Street. They are general Southern agents for the Arctic Ice Machine Company of Canton, Ohio.

Two New Officials.

Arthur D. Little, Inc., chemists, engineers, and managers, Cambridge, Mass., have elected Chester M. Clark to be treasurer, and have appointed Merton R. Sumner to be chief engineer. Mr. Clark was formerly with Stone & Webster, Inc., and during the war was engaged at Hog Island. Mr. Sumner was formerly chief engineer in New England for Fred T. Ley & Co., Inc., and was more recently chief engineer with the Fuller Industrial Engineering Corporation.

Their New Factory Finished.

Joseph Stoiz & Son, Incorporated, have completed their new fireproof factory on a frontage of 500 feet at East 170th street and Harlem River, New York City, for the manufacture of structural and ornamental iron work for office and factory buildings and apartments. It is also fully equipped for the production of light and heavy castings and forgings, machine and plate work for building lighthouses, observation towers, tanks, buoys, etc. All the machinery is of the very last types.

Unique Model of a Bridge.

The Crane Company, of Bridgeport, Connecticut, has on exhibition at its display rooms, 23 West 44th Street, New York, a representation of the Tower Bridge, London, England, made entirely of Crane valves and fittings. This novel reproduction is about 19 feet long, 4 feet wide and 11 feet high and the spans are

57 inches wide. The bridge is of the roller lift type and has four towers, each being provided with one elevator. The lifts are 22 inches long and 30 inches wide. The elevators are 6 inches square and 8 inches high. Each approach has two clocks. Lifts and elevators are operated by specially designed machinery. After the display at New York the bridge will be shipped to the British representatives of the company, Crane-Bellett, Ltd., London, England. There were 15,358 pieces and 16,251 joints used to compose the bridge and not one left hand thread in it.

Has Opened Branch at Greensboro, N. C.

With characteristic enterprise the Piedmont Electric Company, of Asheville, North Carolina, has opened a branch office and warehouse at Greensboro in the same state for the better distribution of goods to its customers. The branch is located at 335 South Davis Street with Frank B. Bibb as local manager, who has a well equipped office and shipping force for prompt service. B. C. Banks, who has charge of eastern territory for the company, will work directly in connection with the Greensboro branch. This company are distributors for the Phillips Wire Co., Pawtucket, R. I., and also handle the Duncan meters and transformers, Banner lamps, Arrow "E" wiring devices, French batteries and flashlights, Columbia and Red Seal batteries, flexible and rigid conduits, telephone wire, economy fuses, and various construction material. Wm. Farr is president and general manager of the company, which was established in 1902; F. O'C. Fletcher is secretary, and Harmon Miller, treasurer.

Oil Engines for Heavy Duty.

The Lombard Governor Company, Ashland, Mass., have entered upon the manufacture of Lombard oil engines of the full Diesel type, the general design and principle of operation of which are fully explained in Bulletin 10D issued by the company. These engines are of the vertical, multi-cylinder, heavy duty type, with pistons, rings, connecting rods, bearings and crank shaft all easily accessible through the front housing doors of the enclosed crank case. Two fine illustrations display cross sections of an engine so that its construction and method of operation may be readily understood. Particular attention is directed to its distinctive advantages which are fully described.

Growing Business Now Incorporated.

The F. E. Myers & Bro. Company has been organized with a capital stock of \$6,000,000 to take over the manufacturing business heretofore conducted by F. E. Myers & Bro., Ashland, Ohio, manufacturers of farm operating equipment, including force and lift pumps, hay tools, etc. There are no changes in organization or personnel except the addition of dependable men of experience and the business will be conducted in the future as it has been in the past. The officers are F. E. Myers, president; P. A. Myers, first vice-president and general manager; John C. Myers, second vice-president; Guy C. Myers, third vice-president; F. B. Kellogg, secretary and treasurer; the remaining directors being A. N. Myers, T. W. Miller and G. D. Myers. This incorporation has been accomplished to provide for the rapidly increasing business of the Myers plant and simultaneously it is announced that a new catalog with discount sheet and revised prices have been issued. The business of F. E. Myers & Bro. was established in 1875. Starting in a small way and in a basement, with a few hand tools, limited capital and no plant reaches two pumps per minute of working hours and a corresponding number of cylinders, hay tools, door hangers, etc.

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NEW \$750,000 RIALTO THEATRE AT LOUISVILLE.



Rialto Theatre recently completed at Louisville, Ky., for Majestic Amusement Co.; brick, concrete and steel construction; front of Atlantic terra cotta; seating capacity 3,500; cost about \$750,000; Joseph & Joseph, architects, Louisville.

Valuable Information on Foreign Trade.

The official report of the Eighth National Foreign Trade Convention, held at Cleveland, Ohio, May 4, 5, 6 and 7, this year, has been issued in a handsomely printed and bound volume of more than 600 pages. It gives a stenographic report of the proceedings, the discussions and the speeches at the eleven group sessions, and also the addresses at the general sessions, together with a list of the delegates present, the organizations and the companies represented and the personnel of the convention. The book is particularly valuable for its presentation of the experience of American business men engaged in foreign trade in all parts of the world and also the views of American leaders of industry concerning the problems confronting those engaged in or about to engage in foreign trade, besides the advice of technical experts on all phases of trade with other countries. At the convention there were delegates from all over the world, with the result that a great fund of information was developed and displayed. Copies of the book may be obtained from Edward A. Leroy, Jr., acting secretary National Foreign Trade Council, India House, Hanover Square, New York City. Price, \$2.50.

On Time Records.

According to statistics issued by the Southern Railway its passenger trains between New York, Washington and Atlanta maintained remarkable records for being on time during six weeks ended July 12, and the same standards are being preserved. Trains Nos. 30 and 35 were on time 100 per cent and six other through trains had very nearly as good records, being rarely late and then usually very little behind time. Double track, improved equipment and constant care are responsible for these records.

How the Department of Agriculture Contributed to the Science of Metallurgy.

An incident is related of Henry C. Wallace, the new Secretary of Agriculture, which identifies him with the iron and steel business in an interesting way. Bennett Chapple of the American Rolling Mill Co., Middletown, Ohio, tells the story as follows:

"Several years ago the readers of the farm publication of which Henry C. Wallace is editor made complaint of rapidly rusting fence wire. Mr. Wallace put their problem up to the Agriculture Department, the same as he would have done in case an inquiry had come regarding a mysterious disease among livestock. Instead of a sick hog, it was a case of sick steel.

"The readers wanted to know why the wire fences they put up did not last like the old-fashioned wire fences their fathers had put up before them. Rust seemed to be playing havoc. The government metallurgists at Washington asked for specimens of old fence wire which has resisted corrosion, along with samples of the new fence wire which had rusted so rapidly, for the purpose of comparison and analysis. Young Wallace spent one whole week gathering the samples of old iron wire fences, some that had stood so long that the wooden cross bars had rotted away.

"The specimens which he sent on to the Department of Agriculture at Washington were analyzed by the department metallurgist, and a bulletin was issued calling attention to the fact that modern rapid practice in steel making had left the metal full of impurities, as compared with the old-fashioned hand-made iron, and that the presence of these impurities caused the rapid corrosion of the new fence wire.

"As a result of this little bulletin issued by the Agriculture Department, the manufacture of pure iron on a commercial scale was successfully undertaken, and the product not only applied to wire fences, but also to the different forms of sheet metal, where rust resisting iron is an essential economy.

"The Department of Agriculture made a notable contribution to the science of metallurgy in this discovery of the reason why steel and iron rust, and it is a matter of interest that Henry C. Wallace, who sent the first samples of rusted fence wire to Washington and thereby opened up this important investigation, is today heading the department."

Leather Making Described and Pictured.

"Hides and Skins and the Manufacture of Leather" is the third of a series of books issued by the First National Bank of Boston, which is notable for the high character of its publications and their economic value. Like the preceding books this one of 80 pages considers and describes the various processes of manufacture so that anyone not in any degree acquainted with them may understand, be interested and accurately informed. Everything is described and illustrated from the time the skins are taken from the cattle to their last state as the finished product of a leather factory. The manufacture of leather differs materially in details according to the use which is to be made of the product. There are four parts in the book devoted respectively to raw material, sole leather manufacture, manufacture of upper-shoe and dressing leather, and finally economic distribution, price fluctuations, etc. The pictures are numerous. Copies of the book may be obtained by applying at the commercial service department of the bank. The preceding books were about the cotton and the wool industries, respectively.

PROPOSALS

BOND ISSUES
BUILDINGS
PAVING
GOOD ROADS

Bids close August 22, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., July 28, 1921. Sealed proposals will be opened in this office at 3 p. m., August 22, 1921, for the construction (exclusive of mechanical equipment) of a main hospital building, residence for officer in charge, nurses' quarters, attendants' quarters, laundry building, garage, and boiler house, of the United States Public Health Service Hospital at Tanner's Creek Norfolk, Va. Drawings and specifications may be obtained from the custodian at the site of the hospital, Norfolk, Va., or at this office, in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close August 23, 1921.

DEPARTMENT OF THE INTERIOR, Washington, D. C., July 27, 1921. Sealed proposals in duplicate will be received at the Department until two o'clock P. M., Tuesday, August 23, 1921, for (1) Construction of a fireproof building for home economics and dining hall at Howard University, Washington, D. C.; (2) for installation of heating, plumbing and gas; (3) for electrical installation; and (4) for furnishing, erecting and painting the structural steel and iron work for said building, in accordance with the drawings and specifications for the work, copies of which, with form of proposal, may be had upon application to the Department. A certified check in the sum of Twenty-five Dollars (\$25.00), payable to the order of the Secretary of the Interior, will be required as a guarantee for the safe return of each set of plans loaned.

The right is reserved to reject any and all bids, waive technical defects, and accept one part and reject the other, as the interests of the Government may require. Applicants should state the class or classes of work above mentioned upon which they propose to bid. Proposals must be securely enveloped, marked "Proposals for construction of a building for home economics and dining hall Howard University," addressed to the Secretary of the Interior, Washington, D. C., F. M. Goodwin, Assistant Secretary.

Bids close August 18, 1921.

DEPARTMENT OF THE INTERIOR, Washington, D. C., August 2, 1921. Sealed proposals in duplicate will be received at the Department until two o'clock P. M., Thursday, August 18, 1921, for the installation of four sets of stokers at the central power plant at Freedmen's Hospital, Washington, D. C., in accordance with specifications, copies of which may be obtained upon application to the Chief Clerk of the Department.

The right is reserved to reject any and all bids and waive technical defects, as the interests of the Government may require. Proposals must be securely enveloped, marked "Proposals for stokers, central power plant, Freedmen's Hospital," and be addressed to the Secretary of the Interior, Washington, D. C., F. M. GOODWIN, Assistant Secretary.

Bids close August 19, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., August 1, 1921. Sealed proposals will be opened in this office at 3 P. M., August 19, 1921, for the construction of mezzanine floors, etc., in the United States Post Office, and Court House at Philadelphia, Pa. Drawings and specifications may be obtained from the Custodian at Philadelphia, Pa., or at this Office in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close September 5, 1921.

PROPOSALS FOR THIRTEEN STEEL BARGES—Office, Mississippi River Commission, 1st and 2nd Districts, Customhouse, Memphis, Tenn. Sealed proposals will be received here until 11 a.m., Sept. 5, 1921, and then opened, for furnishing 13 steel barges. Further information on application.

Bids close August 30, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., July 27, 1921.—**SEALED PROPOSALS** will be opened in this office at 3 p. m., Aug. 30, 1921, for the installation complete of the Mechanical Equipment for two Semi-Ambulant Quarters, and a Laundry, a Refrigerating Plant, a Sewerage Ejector, and Outside Service at the United States Public Health Service Hospital No. 63 at Lake City, Fla., in accordance with the drawings and specifications, copies of which may be had at this office or at the office of the Superintendent at Lake City, Fla., in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close Aug. 18, 1921.

Proposal for Furnishing and Installing Low Pressure Heating System

Office District Engineer, Mississippi River Dredging District, Post Office Box 1017, Memphis, Tenn. Sealed proposals for furnishing and installing a low pressure heating system in warehouse building at U. S. Dredge Depot will be received here until 3:30 P. M., August 18, 1921, and then opened. Further information on application.

Bids close Aug. 30, 1921

\$39,000 6% Public Improvement Bonds

Dunedin, Fla. Notice is hereby given that on the 30th day of August, A. D., 1921, the Town Council of the Town of Dunedin, Florida, will receive bids for the purchase of 6%, Twenty-Year, Public Improvement Bonds, to the amount of Thirty-Nine Thousand Dollars (\$39,000.00), dated July 1st, A. D., 1921, less accrued interest to date of actual delivery of bonds; all bids to be accompanied by certified check of (\$500.00) Five Hundred Dollars as evidence of good faith to be immediately returned to unsuccessful bidders. The town reserves the right to reject any and all bids.

By order of the Town Council.
PERCY D. NINEN,
Town Clerk.

Bids close August 20, 1921.

\$250,000.00 6% Pasquotank County Road Bonds.

Elizabeth City, N. C. Sealed bids will be received by the Secretary of the Pasquotank Highway Commission at his office in the Court House, Elizabeth City, N. C., until Saturday, August 20, 1921, noon, for the following bonds of Pasquotank County, viz.: Two Hundred and Fifty Thousand dollars serial coupon bonds in the denomination of \$1,000 each, authorized by Chapter 95 Public Local Laws of the State of North Carolina, special session 1920, and further pursuant to an order passed by the Board at its regular meeting Tuesday, July 5, 1921.

The interest rate will be 6% per annum. The bonds will be prepared at the expense of the Pasquotank Highway Commission. Said bonds shall be dated September 1, 1921, and shall mature as follows: \$10,000.00 on September 1, 1927 and \$10,000.00 each year thereafter until all bonds have been paid.

Interest payable semi-annually, March 1 and September 1, both principal and interest payable in lawful money of the United States of America in New York City, or at the option of the purchaser.

The Board reserves the right to reject any or all bids, and to offer said again for sale without further notice. Each bid must be accompanied by a certified check in the sum of \$5,000.00 payable to the Pasquotank Highway Commission as an unqualified guarantee of good faith on the part of the bidder.

The legality of these bonds when sold will be approved by a recognized bond attorney of New York City. For further information apply to the undersigned.

This the 19th day of July, 1921.

CHAS. CARMINE,
Secretary.

Bids close August 29, 1921.

\$700,000 5% Serial Road Bonds

Ruston, La. Sealed bids will be received by the Police Jury of Lincoln Parish, Louisiana, at its office in the court house at Ruston, Louisiana, on Monday, the 29th day of August, 1921, at 10 A. M. for the purchase of its entire issue of Seven Hundred Thousand Dollars (\$700,000) serial road bonds dated April 1, 1921, and maturing in annual installments due April 1, 1924, to April 1, 1951, inclusive, bearing interest at five (5%) per cent per annum, payable semi-annually. Each bid, before being opened, must be accompanied by certified check for 2½% of the face value of the bonds, drawn on a National Bank doing business in Louisiana or a solvent bank chartered under the laws of the state, to insure compliance with such bid, if accepted. The Police Jury reserves the right to reject any and all bids.

At the same time and place the Police Jury will consider bids for one-half only or \$350,000 of above bonds.

S. J. HEARD,
President of Police Jury,
Ruston, Louisiana.

Bids close September 1, 1921.

\$30,000 6% School Bonds

The Board of Trustees of Glennville, School District will receive bids up to Sept. 1, 1921, on thirty thousand dollars of 6% ten-twenty-three year bonds. Interest payable semi-annually. Write C. L. COWART, Glennville, Ga.

\$1,500 6% School Bonds

WANTED—To sell \$1,500 A-1 School District Bonds bearing 6% interest. Address E. C. Coskrey, Wilson, S. C.

Bids close Aug. 29, 1921.

\$425,000.00 6% Road Bonds.

Martinsville, Va. Sealed bids will be received by the Board of Supervisors of Henry County at Martinsville, Va., until August 29th, 1921, at 12 o'clock, Noon, for \$425,000.00 6 per cent, semi-annual coupon, 34-year bonds of said County to be dated October 1st, 1921. Two per cent (by certified check) required with bid.

The right reserved to reject any or all bids. Detailed statement or other information on request to

T. C. MATTHEWS,
Clerk of Board of Supervisors.

Bids close August 15, 1921.

\$25,000 6% Road Bonds

Benson, N. C. Under and by virtue of an act of the General Assembly of the State of North Carolina, 1921, session, and pursuant to a resolution passed by the Board of Road Commissioners of Banner Township, Johnston County, July 9, 1921, said Board of Road Commissioners will, at the office of James Raynor, in the town of Benson, N. C., receive until August 15, 1921, 2 o'clock P. M., sealed bids for the purchase of road bonds of said township, in the sum of \$25,000.00, in denominations of \$1,000.00 each, said bonds to be dated July 9, 1921, maturing Forty Years from the date thereof, bearing interest at the rate of 6% per annum, payable semi-annually, said interest and principal payable at the Hanover National Bank in the City of New York, State of New York. Each bid must be accompanied with a certified check of 2 per cent of said bonds to be purchased. Said board reserves the right to reject any and all bids made on said bonds.

For further information in regard to the sale of said bonds address Ira B. Raynor, Chairman of said Board, Benson, N. C.

This 14th day of July, 1921.
BOARD OF ROAD TRUSTEES OR ROAD COMMISSIONERS OF BANNER TOWNSHIP, JOHNSTON COUNTY.
IRA B. RAYNOR, Chairman.

Bids close August 24, 1921.

Concrete Pavement, Curb, Gutter and Storm Sewers

Camden, Arkansas.
The Board of Commissioners of Camden Paving District No. 1 and Camden Curb and Gutter District No. 1, of Camden, Arkansas, at 10 A. M., Wednesday, August 24, 1921, will receive bids at the City Hall for the work to be done in these Improvement Districts.

The estimated aggregate quantities of work to be done in both districts are approximately as follows:

6000 cu. yds. grading.
4500 lin. ft. storm sewers from 10 in. to 27 in. diameter.
20 manholes.
37 catch basins.
21,495 sq. yds. Concrete Pavement and Gutter.

6336 sq. yds. Reinforcement Fabric.
10,016 lin. ft. Concrete Curb.

All work will be paid for in cash on monthly estimates of the Engineers which will include materials delivered at site of work and to be incorporated in same. Certified check required not less than 4 per cent. of total amount of bid.

Prospective bidders are referred to the Engineer's Plans and Specifications on file in his office at Texarkana, Arkansas, and at the office of the Secretary of the Board, at Lockett & Copeland's, Camden, Arkansas. Specifications may be secured from the Engineer by prospective bidders by depositing the sum of \$3.00 for same with him, which amount will be refunded if Specifications are returned in good condition before bids are opened. If plans are desired deposit of \$12.00 additional will be required, \$7.00 of which will be refunded upon the return of same in good condition to the Engineer not later than one week after bids are received.

The right is reserved to reject any and all bids.

BOARD OF IMPROVEMENT OF SAID DISTRICTS.

By Geo. Gordon, Chairman,
E. W. Copeland, Secretary,
Leo Berg, Member.

E. F. Petersen, Engineer,
Texarkana, Ark.

Bids close August 24, 1921.

Balancing Reservoir, Surge Tank, and Closing Shaft 13

WATER DEPARTMENT. Sealed proposals in duplicate, endorsed "Bids for Building a Balancing Reservoir, Surge Tank and Closing Shaft 13, Contract No. 51, Water Department," addressed to the Board of Awards of Baltimore City, will be received at the office of the City Register, City Hall, Baltimore, Md., until 11 A. M., Wednesday, August 24, 1921, at which time they will be publicly opened and read.

Plans and specifications may be obtained at the office of the Water Engineer, City Hall, Baltimore, Md., on or after August 10th, 1921. A charge of twenty-five (\$25.00) dollars will be made for each set of plans and specifications; this amount will be refunded upon the return of these plans and specifications before September 2nd, 1921, in good condition. Specifications used in making a bid will be considered as returned. Blue prints will be furnished to prospective bidders only upon written request, at 25 cents each, which amount will not be refunded.

A certified check of the bidder on a clearing-house bank, made payable to the Mayor and City Council of Baltimore, for the sum of Five thousand dollars (\$5,000.00), will be required with each bid.

The work to be done consists in building an earth dam, sinking two shafts 12 feet in diameter about 30 feet deep, re-excavating and closing an old shaft. Approximate quantities are as follows:

Rolled Earth Embankment, 14,000 cubic yards.

Rock Excavation, 2,400 cubic yards.

The successful bidder will be required to give bond equal in amount to the value of the contract to comply with the City Charter respecting contracts.

The Board of Awards reserves the right to reject any or all bids.

WM. A. MEGRAW,
Water Engineer.

H. G. PEIERING,
Chief Engineer.

Approved:

WM. F. BROENING,
Pres. Board of Awards.
ROLAND R. MARCHANT,
City Solicitor.

Bids close September 1, 1921.

Court House

McKee, Ky.

The Building Committee for the Court House to be erected at McKee, Jackson County, Ky., invite sealed proposals for the erection and completion of a new Court House according to the plans and specifications prepared by Architects Milburn, Heister & Company, Washington, D. C. Plans will be on file on and after August 1, 1921, with the Architects, also at the County Clerk's office at McKee, Ky. All bids must be filed with the Building Committee on or before September 1, 1921, as evidence of good faith each contractor will submit with his bid a certified check on some well-known bank for \$1,000.00, made payable to D. G. Collier, Chairman. Should their bid be accepted they will enter into contract at once and execute a satisfactory Guarantee Co. bond in the sum of \$25,000.00 for the faithful performance of the contract. The Committee reserves the right to reject any or all bids. For plans write the Architects. Return plans Parcel Post to the Chairman when bids are filed.

Bids closes Aug. 22, 1921.

Sewer Construction

Washington Suburban Sanitary District.
Hyattsville, Md.

Sealed proposals for Contract 20-S will be received at the office of the Washington Suburban Sanitary Commission, Evans Bldg., New York Ave., Washington, D. C., until Monday, August 22, at 3 p.m. Work includes about 12,250 feet, 6" to 10" sewer, together with house connections, manholes, etc.

Plans and specifications may be obtained at the office of the Chief Engineer of the Commission, Hyattsville, Md., upon receipt of deposit of \$5.00 which will be refunded upon return of plans and specifications in good condition before Sept. 10.

WILLIAM T. S. CURTIS
T. HOWARD DUCKETT
EMORY H. BOGLEY
Commissioners.

Bids close August 12, 1921.

Water and Sewerage Systems

Sealed proposals will be received at the office of the Secretary until one o'clock P. M. on August 12, 1921, for the construction of a water supply system and a sewage collection system for Samarand Manor, the State Industrial School for Girls at Samarand, N. C. Bids should be addressed to the Secretary of the Board of Managers, and accompanied by a certified check to the amount of five per cent. of the bid.

The right is reserved to reject any and all bids. Plans and specifications may be obtained from The Carolina Engineering Company, Wilmington, N. C.

MRS. J. R. PAGE,
Secretary.

Bids close Aug. 29, 1921.

Street Paving

Selma, Ala.

Sealed bids will be received by the undersigned until noon of Monday, August 29th, 1921, for the paving of a portion of Broad Street in Selma, Ala., with brick, asphalt, asphaltic concrete, bitulithic, or concrete. Plans and specifications may be examined at the office of the City Engineer of Selma on and after August 15th, 1921.

W. O. CRISMAN,
City Engineer.

Bids close August 30, 1921.

Street Paving

Durham, N. C.

Sealed proposals will be received by the Manager of the City of Durham, N. C. for the construction of a permanent pavement of a minimum of 45,000 square yards and a maximum of 70,000 square yards, until 2 o'clock P. M., August 30, 1921, at which time they will be opened and publicly read at the Council Chamber.

Plans and specifications of the proposed work may be had upon the deposit of \$5.00 at the office of the City Engineer, between the hours of 8 A. M. and 6 P. M., from August 10, 1921 to August 29, 1921. Said specifications provide for the grading, draining, curbing and paving with some suitable pavement.

The City reserves the right to reject any or all bids, or to accept such bids as appear in its judgment to be for the best interests of the City.

Certified check for \$10,000.00 will be required with each bid.

R. W. RIGSBY, City Manager.

Bids close August 18, 1921.

Street Paving

Richwood, W. Va.

Sealed bids will be received by the Recorder of the City of Richwood, Nicholas County, West Virginia, at his office in the City Hall in said city up until 8 o'clock P. M. of August 18, 1921, for the paving of Riverside Drive, between Greenbrier Road intersection and Boggs Avenue, in said city. Detailed plans and specifications may be seen and obtained at said recorders office.

Bids shall be marked: "To the City Council of the City of Richwood. Bid on Riverside Drive Paving."

Each bidder shall deposit with his bid a certified check for \$500.00, payable to the City of Richwood to be forfeited if the bidder fails to enter into contract for said work if same is awarded to him. Bond will be required of the contractor for the faithful performance of the contract within the time and in accordance with the terms of the contract.

The Council reserves the right to reject any and all bids.

RUSSELL RICHARDS,
Recorder of the City of Richwood.

Bids close August 18, 1921.

Street Paving

Richwood, W. Va.

Sealed bids will be received by the Recorder of the City of Richwood, Nicholas County, West Virginia, at his office in the City Hall in said city up until 8 o'clock P. M. of August 18, 1921, for the paving of East Main Street between Virginia Street and Park Place in said city. Detailed plans and specifications may be seen and obtained at said recorders office.

Bids shall be marked: "To the City Council of the City of Richwood. Bid on East Main Street Paving."

Each bidder shall deposit with his bid a certified check for \$1,000.00 payable to the City of Richwood to be forfeited if the bidder fails to enter into contract for said work if same is awarded to him. Bond will be required of the contractor for the faithful performance of the contract within the time and in accordance with the terms of the contract.

The Council reserves the right to reject any and all bids.

RUSSELL RICHARDS,
Recorder of the City of Richwood.

Bids close August 18, 1921.

Street Paving

Richwood, W. Va.

Sealed bids will be received by the Recorder of the City of Richwood, Nicholas County, West Virginia, at his office in the City Hall in said City up until 8 o'clock P. M. of August 18, 1921, for the paving of West Main Street, between Oakford Avenue and First Street in said city. Detailed plans and specifications may be seen and obtained at said recorders office.

Bids shall be marked: "To the City Council of the City of Richwood. Bid on West Main Street Paving."

Each bidder shall deposit with his bid a certified check for \$1,000.00 payable to the City of Richwood to be forfeited if the bidder fails to enter into contract for said work if same is awarded to him. Bond will be required of the contractor for the faithful performance of the contract within the time and in accordance with the terms of the contract.

The Council reserves the right to reject any and all bids.

RUSSELL RICHARDS,
Recorder of the City of Richwood.

Bids close August 15, 1921.

Sewer Construction

Durham, N. C.

Sealed proposals will be received by the Manager and Council of the City of Durham for the construction of sanitary sewers until 8:00 o'clock P. M. August 15th at which time they will be opened and publicly read at the Council Chamber.

Plans and specifications of the proposed work may be had at the office of the City Engineer between 9:00 A. M. and 5:00 P. M. from July 25th to August 15th. Said specifications provide for the construction of approximately 28,000 feet of 8 inch sewer main and 1200 feet of 10 inch sewer main.

Certified check for \$500.00 required with each bid. The Council reserves the right to reject any or all bids or to accept such bids as appear in its own judgment to be for the best interests of the City.

H. W. KUEFFNER,
Acting City Manager.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWERS, MISCEL- LANEOUS PROPERTIES

I MAKE A SPECIALTY of leases, royalties, production, coal and timber lands and fluorspar properties in Kentucky. Have a fine tract of timber, with mills, etc. Also handle leases in Texas and Louisiana. E. D. Watkins, Oil Producer, Irvine, Ky.

WYOMING has large deposits of coal, iron, asbestos, graphite, mica, manganese, phosphate, oil shale, sulphur and sodium sulphate, close to railroads and good highways. For authentic information, address Commissioner of Immigration, 301 Capitol Bldg., Cheyenne, Wyo.

COAL LAND AND MINES

FOR SALE—Going Elkhorn mine two seams coal, electrically equipped. Four cars per day, can easily be increased to 500 tons. About three hundred acres, under advantageous lease, underlaid with Lower Kittanning Seam, and partly underlaid with Upper Freeport, Lower Freeport and Bakertown Veins. Advantageously located near large town in Maryland on C. & P. R. R., in the Georges Creek Region. Economical operation. Address: Horace P. Whitworth Westernport, Maryland.

MR. MANUFACTURER.—Eliminate the coal operator's profit and arrange for your fuel requirements at producer's cost. Owners offer for sale operating coal mine-capacity 250 tons per day, can be increased to 500 tons. About three hundred acres, under advantageous lease, underlaid with Lower Kittanning Seam, and partly underlaid with Upper Freeport, Lower Freeport and Bakertown Veins. Advantageously located near large town in Maryland on C. & P. R. R., in the Georges Creek Region. Economical operation. Address: Horace P. Whitworth Westernport, Maryland.

10,000 ACRES Kentucky splint coal lands, undeveloped, 1,000-acre tracts, \$30.00 per acre, easy terms. Between Hazard and Jellico fields. Five workable veins superior, low-sulphur, low-ash splint, including fine showing 3 to 5 feet, Chilton vein of Mingo and Boone counties, West Virginia. Worth \$100.00 per acre when projected railway completed. Virgin timber. Box 21, Islip, New York.

PHOSPHATE LAND

FOR SALE—Few deposits of high grade hard rock phosphate, also 5,000 acres land heavily underlaid with both soft and hard rock phosphate of very high grade large deposits of both hard and soft phosphate. Address P. O. Box 176, Brooksville, Fla.

OIL LANDS AND LEASES

37 ACRES, oil prospects, Cherokee County, Okla. Between Tahlequah and Tulsa, free from lease, absolute title, \$4 per acre for quick sale. Abstract furnished. You can sell for \$5. Box 67-A, Tahlequah, Okla.

FOR SALE—Oil properties, leases and producing properties. Large and small tracts for the far-sighted investor, in and near the oil fields of South Texas. Purchase now and profit when development comes. Hitchcock, Cooper & Feltner, Suite 223 Bedell Bldg., San Antonio, Texas.

CLAY PROPERTIES

LARGE BRICK CLAY PROPERTY. Favorably located directly on railroad and on bricked highway, eight miles west of Newberne, N. C.; adapted for high-grade brick, tile and other clay products. Has been examined and recommended by an eminent engineer as being unusually meritorious. Report will be furnished to interested parties. Owners will accept part payment in securities of properly financed and managed company. Thomas B. Hammer, Owner, Philadelphia, Pa.

TIMBER LANDS WANTED

WANTED—Timber lands and income properties. Any size, anywhere. Write Chas. A. Phililus, 510 E. 120 St., New York.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, post-office or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 28c. per line; 300 lines, 26c. per line; 500 lines or more, 25c. per line.

MINERAL AND TIMBER LANDS, WATER POWERS, MIS. EL- LANEOUS PROPERTIES

TIMBER

TIMBER FOR SALE.

From twenty to one hundred and fifty million feet, in separate tracts, of pine and of hardwood. Deal direct with owner. J. W. Barnes, Savannah, Ga.

TIMBER FOR SALE

120,000,000 FEET virgin yellow pine timber, on railroad and near good port in Florida. For estimates, map and price, address the owner, Arthur T. Williams, Jacksonville, Florida.

158 MILLION FEET of Southern Alabama Pine, 55 per cent. of which is long leaf yellow pine. You deal with owners direct and none but direct buyers need reply. There can be 75 million feet more added to this tract. P. O. Box 839, Mobile, Alabama.

FOR SALE—Fifteen million feet of first class yellow pine timber, and six to eight million of high grade cypress, all in one body close to railroad. Box 103, Quitman, Georgia.

LATH AND TOBACCO STAVE TIMBER

FOR SALE—10,000 to 15,000 cords standing timber on N. S. R. R., near Newbern, N. C. Will sell by the cord with cash advance. Fine opportunity for laths or tobacco stave factories. Thos. B. Hammer, Phila., Pa.

2,400 ACRES of round timber bordering East Coast Railroad and Highway, estimated 1,500 feet per acre. A real colonization tract with a timber value. Sacrifice \$35,000 fee, simple; terms. Biggest snap. O. V. Zangen, Horticulturist, Orlando, Fla.

TIMBER OPERATION

FOR SALE—Lumber milling proposition, complete equipment, now in operation, Eastern Carolina; 25,000,000 feet timber; plenty more available; big bargain; \$175,000, half cash, balance terms. Address No. 5700, care Manufacturers Record, Balto., Md.

LUMBER AND BUILDING MATERIAL

WHEN IN NEED of flooring, ceiling, siding, finish, roofers, lath, shingles and dimension; write Stephens Lumber Co., Jacksonville, Fla.; 50 E. 42d St., New York city, or Hibernia Bank Bldg., New Orleans, La.

LUMBER BUYERS ATTENTION

Lumber cut and milled in large quantities, boards and dimensions, to suit purchasers, let me know your needs, remilling in transit a specialty. Jno. W. Shiver, Americus, Ga.

FOR SALE—Lumber Milling Proposition, 5,000 acres in fee, complete equipment, now in operation. West Virginia. 15,000,000 feet of timber, 500,000 feet now on stick. This property will be sold at a bargain. Address Jno. C. Chidester, Weston, West Virginia.

MINERAL AND TIMBER LANDS, WATER POWERS, MISCEL- LANEOUS PROPERTIES

FARM AND TIMBER LANDS

FOR SALE—Several small timber tracts suitable for portable mill operations. Good rail and wagon road facilities. Also mountain farm, grazing and orchard lands. Apply Woods Department, Champion Fibre Company, Canton, N. C.

FRUIT, FARM AND TRUCK LANDS

ALABAMA

FOR SALE—Several thousand acres of agricultural land in North Alabama, extending from the Tennessee river to the foot hills of the Cumberland Mountains, traversed by Southern Railroad. Address No. 5855, care Manufacturers Record, Balto., Md.

FLORIDA

FLORIDA. — Did you ever think about Florida strawberries—marketed December to May—potatoes, cabbage, lettuce, celery, etc., and the high prices they bring? We also ship in trainload the best oranges and finest grapefruit in the world. Send for 1921 list of groves and farms. Tampa-West Coast Realty Co., Inc., opposite Postoffice, Tampa, Fla.

FOR SALE—Everglade muck lands along the Tamiami Trail, also lots in Tamiami Townsite, 28 miles west of Miami. An investment opportunity worth investigating. Realty Securities Corporation, Miami, Fla.

GROVE FOR SALE below frost line, situated on the famous Ridge between Boston & Lake Wales at Alturas in Polk Co., Fla. 160 acre grove and farm, 60 acres in grove from 2½ to 30 years old. Experts estimate fifteen thousand boxes this coming year. Will more than double this in year or two. Fine country home, tenant houses, mules, all tools necessary for big farm and grove. Deep well with gasoline engine; plenty of other fruit groves alone will more than pay taxes. A sacrifice at \$450,000. Balance 1, 2, 3 years. Must be seen to be appreciated. Dr. E. F. Carter, 515½ Franklin St., Tampa, Fla.

FREE FLORIDA FARMS.—25 cents per acre monthly pays for it and profit-sharing certificate in our sugar and stock farms pays your money back under positive guaranty. Send for free booklet. Ideal American Corp., Johnstown, Bradford Co., Fla.

DAIRY FARM NEAR WASHINGTON—380 acres of fertile chocolate loam, slate subsoil land. Pastures 90 head of cows. Two good weatherboarded barns. Dairy barns 32 cows, equipped with Loudon stanchions, litter carriers and individual watering cups. One wood silo 14x30 ft., 1 tile silo 16x40 ft. Cuts three tons of alfalfa, 15 tons of ensilage and two tons of hay per acre. Level and can be worked to advantage with machinery. Practically new 11-room dwelling with bath, sleeping porch and modern conveniences. Income last year \$12,600.00. This farm is highly desirable and is priced reasonably at \$40,000.00. OGLESBY REAL ESTATE AGENCY, INC., Peoples National Bank Bldg. Lynchburg, Va.

VIRGINIA

FOR SALE OR EXCHANGE—One of the best 500-acre grazing and stock farms in Virginia. Will take as part payment city property or coal land. Address No. 5827, care Manufacturers Record, Baltimore, Md.

WEST VIRGINIA

THE BEAUTIFUL SHENANDOAH VALLEY.

Fine homes, fine farms, and it and the Eastern Panhandle of West Virginia the best orchard land in the world; convenient to the best markets. Write me for information. S. S. Felker, Public Square, Martinsburg, W. Va.

FINANCIAL

"THE Betrayal of the People in the Federal Reserve Act," T. Cushing Daniel, author. This "International Bankers' Gold-Basis Scheme" has produced and can produce nothing but disaster. Read the remedy in this book and act at once to protect your business, your family and your country. Popular Edition, 25 cents. The Monetary Educational Bureau, 1416 F Street, Washington, D. C.

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And cards. New low prices in effect now. Let us send samples and quote prices. No dies. We have a reputation to sustain. The Print Shop, Mantion, Mich.

BETTER PRINTING for less money. Printing users send for free samples and standardized prices of a thousand items. E. Fantus Co., Printers 523 S. Dearborn St., Chicago, Ill.

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What is the latest available authentic information worth to you? General information bureau; general research work; briefs; digests; codifications and abstracts. Material for essays, debates, theses, sermons, speeches, lectures, arguments, addresses, editorials, and special articles on any subject and for any occasion. Card, analytical, intensive and general index work. Concordances. If you want thorough, conscientious, individual, expert work procure the services of Wm. McAfee Goodwin, District National Bank Building, 1406 G St., N. W., Washington, D. C.

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DITCHING.

Austin No. 9 machine digs for pipe lines 16 feet deep, 20 to 40 inches wide. For drainage it gives banks half-to-one slope, any depth to 6 feet, with 23-inch bottom. When 6 feet deep the top width is 8 feet. I dig by yard or lineal foot, or will furnish crew and work by the day. Best work at reasonable prices. References furnished. Machine now available. J. C. Stancil, Smithfield, N. C.

INCORPORATING COMPANIES

ARE YOU GOING TO INCORPORATE—reorganize or consolidate, are you planning to promote or finance any proposition? If so, write us for particulars. We render service everywhere.

National Legal Service Company,
Suite 436, Ridge Building,
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BUSINESS OPPORTUNITIES

Planing Mill Machinery, Band Resaw, Planer, Electric Motor, Shaft, Belts, Pulleys, Saws, etc., will be sold at auction in about ten days. Send address for advice of time and place of sale. W. C. Lam, Box 1143, Norfolk, Va.

AS ATTORNEY for Patentee I will negotiate for sale or marketing of recently patented Automobile Generator and Starter. C. B. Spencer, Swan Quarter, N. C.

FINANCIAL INTEREST in large Southern City (highest bank references) contemplate building ice plant fifty to one hundred ton capacity. Invite subscription to 45 per cent. of their capital stock. Prospects favorable to large returns. Full particulars in detail to those interested. Address No. 5856, care Manufacturers Record, Balto., Md.

WANTED—To correspond with jobbers, dealers or consumers of Plow Handles. In view of selling output. J. D. Blackard Stave & Cooperage Co., Inc., Stuart, Va.

PARTY WANTED with \$5,000 to \$10,000; high class, legitimate, profitable business, money making possibilities already proved; good references and business ability; will accept active or silent partner; investment should pay unusually large profits; don't overlook this opportunity. Address No. 5852, Manufacturers Record, Balto., Md.

BUSINESS OPPORTUNITIES

I SPECIALIZE in industrial, warehouse and business sites at and adjacent to Washington, D. C.

M. B. HARLOW,
Harlow Building, Colorado Building,
Alexandria, Va. Washington, D. C.

WANTED—A good-sized block of high-grade stock of exceptional earning possibilities to market among our large clientele. Money must be for expansion. Wiers & Co., 115 Broadway, New York. Established 1894.

The advent of the fall season is bringing us many inquiries from our host of old customers, both domestic and overseas. We are exclusive manufacturers representatives and as such are in close touch with the users and distributors of products of various manufacture. It will be to your interest to communicate with us—a medium thru which your goods will find a ready and satisfactory outlet. J. D. Ryan, 145 Greenwich St., New York.

WANTED—RESPONSIBLE PARTY with \$50,000 to join in one of the safest and best real estate deals. Two to three hundred per cent profit. Unless you mean business do not answer. Will stand the strictest examination. Address No. 5826, care Manufacturers Record, Baltimore, Md.

PATENT FOR SALE—Hold up Frustrating device for banks and other establishments. Outright or royalty. For particulars address P. O. Box 215 Collins, Mississippi.

WANTED—To sell our Army & Navy Store. Doing good business. Wonderful opportunity for a live wire. Other business necessitates selling. Address P. O. Box 597, Staunton, Va.

BUSINESS BUILDING in Cumberland, Md. Two-story brick in heart of business district. Suitable for any kind of manufacturing except laundry. Mighty fine location for retail business. This property worth \$75,000. Can sell for \$50,000. Small cash payment and easy terms. A real opportunity. Webster L. Williams, Cumberland, Md.

I KNOW NORFOLK.

Waterfront, Belt Line and
Inland Industrial Properties.

W. W. ROBERTSON,
The Realtor,
Monticello Hotel Norfolk, Va.

MY ASSOCIATIONS with responsible New York Underwriters enables me to prepare your propositions in a manner which will demand their serious consideration. Attorney Alfred S. Perry, Fairfield, Conn.

WANTED TO EXCHANGE 7,500 acres excellent undeveloped Michigan farm land, for a going crushed stone or gravel or brick business. Cash or time for difference. H. R. Garden, Salem, Va.

FOR SALE—Cleaning and dyeing plant in Asheville, N. C. Brick building, dandy location, worth thirty thousand, can be bought for twenty-two thousand dollars. Box 150, Asheville, N. C.

WANTED—To establish representation throughout the country by individuals or selling organizations in close touch with steam generating plants and capable of financing their sales to sell and install high grade hand stoker. A fine proposition for hustlers. Write for details. Vogt Brothers Mfg. Co., Louisville, Kentucky.

WILL LEASE an elegantly equipped Laundry, located in a fire-proof building. Power and steam already installed, and same can be had at a very small cost. Located in Petersburg, Va., only eight miles from the industrial city of Hopewell, which is without any laundry at all. Address No. 5857 care Manufacturers Record, Balto., Md.

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CARL HILL
EQUIPMENT INSPECTOR
HAVE YOUR inspections made at a minimum cost by a practical mechanical man of over twenty years' experience, locomotives, cars, machinery, and all railroad equipment—a specialty, your interest will be protected. Box 269, Altavista, Va.

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BALTIMORE

FACTORY

SITES

William Martien & Company,
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ADA, OKLAHOMA FACTORY SITES FREE
CHEAP NATURAL GAS FOR FUEL
PLENTY OF PURE SPRING WATER
TWELVE DIFFERENT RAW MATERIALS
THE BEST LIVING CONDITIONS
EXCELLENT TRANSPORTATION FACILITIES
INVESTIGATION INVITED BY CHAMBER OF COMMERCE.

FOR SALE—I have the best factory site for sale South, 32 acres, large river and rail frontage, bluff land, right in best town in the country. Price and further particulars furnished on request. W. T. Byrd, Baton Rouge La.

FACTORY SITE AND MARINE RAILWAY

Ideal factory site for furniture, stove, automobile, knitting, glove, brick, barrel, etc., on water, near railroad, on thirteen acres land on which are office and ware buildings, machinery ready installed, buildings wired, thirty thousand dollar fire protection water system operating, marine railway and machine shop operating. Complete saw mill and wood working machinery ready to turn on current at Hampton, Virginia. Hampton Roads, "Harbor of a Thousand Ships." All or part for sale at once. Manager Ship Yard, Langley Hotel, Hampton, Virginia.

STEEL ERECTING AND PAINTING

Steel Erector and Painter
Bridges—Buildings—Tanks—Towers
and Stacks
Southern Work Solicited—Steel Dismantling.
C. L. McClure, Columbia, S. C.

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Patent and Trade-Mark Attorney,
306 Interurban Building, Dallas, Tex.
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Former examiner U. S. Patent Office.

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INVENTORS—Send sketch or model of your invention, for opinion concerning patentable nature, and exact cost of applying for patent. Book, "How to Obtain a Patent," sent free. Gives information on patent procedure and tells what every inventor should know. Established 25 years. Chandlee & Chandlee, 412 7th St. N. W., Washington, D. C.

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WE SPECIALIZE IN

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Railroad Sidings and Warehouses.
Business Properties.

WEAVER BROS., 735 15th Street N. W.

INDUSTRIES WANTED

YOU WILL TRAIN with a live crowd when you locate your factory in Hattiesburg, Miss. For details write the Chamber of Commerce.

WANTED—Manufacturing concern to locate factory on desirable railroad site. Free site. Free taxes for 10 years, water supply excellent for town use and power purposes. Will build homes for employees if desired. Will negotiate with reliable parties only. Address The Griffith-Wagner Company, Engineers, Charlottesville, Va.

INDUSTRIAL PLANTS FOR SALE

COTTON MILL
SOUTHERN COTTON MILLS.
We have for sale two cotton mills.
One of 40,000 spindles.
One of 4200 spindles.
Write or wire for particulars.
F. C. ABBOTT & CO.,
Trust Building, Charlotte.

MANUFACTURING PLANT FOR SALE OR LEASE.

All or any portion of a commodious manufacturing plant built of brick, with railroad sidings, floor space enclosed (202,500 ft.) and ample storage capacity, with fifteen acres of ground, for sale or lease.

Suitable for any kind of wood working, furniture, ax, broom and mop handles, baseball bats, box factory, sawing, hardwood flooring plant, cotton mill, rope factory, canning plant, machine shops.

Unlimited supply of raw material, hardwood lumber and cotton, located in the heart of virgin timber and cotton producing country.

Low Freight Rates on account of Mississippi River transportation and two Railroad trunk lines.

Labor and living conditions favorable. Up-to-date town. Ask for Bulletin. Reliable particulars from Chamber of Commerce, Greenville, Miss.

MARINE RAILWAY AND MACHINE SHOP

OPERATING Marine Railway and Machine Shop, Hampton, Virginia. sell or lease. Will sell air compressor complete, 130 horse power, electric motor, starter, receiving tank and cooler. Would sell motor separately. Manager, Shipyard, Hampton, Va.

TOY FACTORY

FOR SALE—Factory manufacturing patented, mechanical wooden toys, thoroughly equipped, plenty trained labor. Toys are a success, and are being handled by biggest toy houses in America. Plant can be moved at small expense to another city. Splendid opportunity. For particulars, write Lock Box No. 67, Cambridge, Maryland.

SITUATIONS WANTED

YOUNG MAN twenty-two years of age desires connection with old established and reliable concern that will require little or no traveling. Now head of one Company and Traveling Sales Manager for another and larger Company. Eight years experience in handling correspondence, directing men and increasing sales. Marrying and wishes to quit road, hence desire to change. Best references furnished. Address No. 5853 Manufacturers Record.

WANTED—Position as manager, superintendent or erecting engineer. Expert in economic operating of ice, gas, electric light and power plants. Twenty-six years practicable experience in managing and operating, checking output and income from office to plant. Address A. B., P. O. Box 776, Jacksonville, Fla.

SITUATIONS WANTED

YOUNG MAN, college education in economics plus four years of excellent business experience, now employed, desires position in managerial or statistical capacity with manufacturer in medium-sized city. No. 5793, care Manufacturers Record, Baltimore, Md.

ABLE and active sales representatives wanted throughout the States to handle a line of pneumatic pressure systems, deep well, condensation and centrifugal pumping machinery. Company established many years has complete manufacturing plant and many thousands of pumps in operation. An excellent opportunity for a number of capable representatives. Address 5831, care Manufacturers Record, Baltimore, Md.

SALESMAN of highest "Ability & Character," now Acting Manager of large Corporation, desires attractive position on Salary and Commission. Address No. 5850 care Manufacturers Record, Baltimore, Md.

CIVIL ENGINEER, technical graduate, 35 years old, nine years' varied experience in highway, railroad resurvey, building construction and cost work. Address Engineer P. O. Box 1054, Washington, D. C.

MAN with thorough training and seven years' exceptional experience in handling all sorts of labor, at present employed as labor manager, would like to change location during this Autumn. Accustomed to large number employees. College graduate and member of Taylor Society. Successful record and highest grade references to former and present employers and associates, including workers. No. 5847, Manufacturers Record, Baltimore.

MEN WANTED

IF ACTUALLY QUALIFIED for salary between \$2500 and \$25,000, communicate with undersigned, who will negotiate strictly confidential preliminaries for such position: executive, administrative, technical, professional; all lines. Not an employment agency. Undersigned acts in direct confidential capacity, not jeopardizing present connections. Established 1910. Send name and address only for explanatory details. R. W. Birby, Inc., 303 Lockwood Bldg., Buffalo, New York.

WANTED—Able and active sales representatives throughout the States to handle a line of pneumatic pressure systems, deep well, condensation and centrifugal pumping machinery. Company established many years has complete manufacturing plant, and many thousands of pumps in operation. An excellent opportunity for a number of capable representatives. Address 5831, care Manufacturers Record, Baltimore, Md.

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1—8x12 belt driven Norwalk air compressor, 100 lbs. pressure, 160 cu. feet air. Machine in first-class condition.
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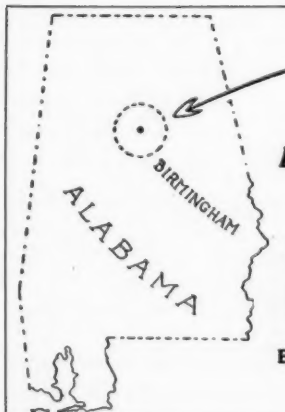
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450 acres in Southeast Alabama.
Begins in mile of Central of Georgia
Railway. Flanks stream that could
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Tract contains white oak, ash, red
and black gum, sycamore and beech.
Also some pine. Total stumpage
estimated four million feet. Cash or
terms. Particulars on request.

Refer File R.

J. M. Mallory

Industrial Agent,

Central of Georgia Railway,
Savannah, Georgia.

NOTICE OF COMMISSIONER'S SALE

Number 122 in equity. Guardian Trust Company, Trustee, plaintiff, vs. B. Earle Appleton, et als, defendants.

Pursuant to the decrees of the District Court of the United States for the Southern District of Texas, Houston Division, entered in the above cause on January 29 and June 30, 1921, I. R. U. Culberson, acting as Special Master Commissioner under the order of said Court, will offer for sale at public outcry at the court house door of Victoria County in the City of Victoria, Texas, between the hours of ten A. M. and four P. M. on Tuesday, the 6th day of September, A. D. 1921, all of the real estate and personal property including the poles, lines, wires and appurtenances, automobiles, horses, wagons, machinery of every kind appertaining to, a part of, or connected with, the properties and plants of the Trust Estate known as the Texas Gas & Electric Company situated in the towns or cities of Cuero (which includes the transmission line from Cuero to Victoria), Victoria, Del Rio, Kingsville, Bishop and Center, in the State of Texas, said plants and properties and the real estate on which same are situated being fully described in the aforesaid decrees and also in an advertisement of this sale being published once each week in a newspaper in Victoria, Texas.

Some of these plants manufacture and distribute electric current only and others manufacture and distribute electric current and ice and others, in addition to these activities, own and operate the local waterworks.

Bids will be received for each plant separately and for the group of six as a unit. Each bidder must deposit a certified or cashier's check for Four Thousand Dollars drawn on a National Bank in Houston, San Antonio or Victoria, with the undersigned at the time and place of the sale before his bid will be received.

Full particulars of the sale, including a detailed description of the property to be sold and all the terms of the sale may be had by addressing Messrs. Baker, Botts, Parker & Garwood, Commercial Bank Building, Houston, Texas, who are attorneys for the owners of the judgments foreclosing the liens on the above-mentioned plants and properties.

Reference is made to both of the aforesaid decrees for all purposes; and the sale will be held in accordance with the provisions of these decrees.

Houston, Texas,
July 21, 1921.

R. U. CULBERSON,
Special Master Commissioner

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Consisting of 65,000 spindles, 1250 broad and 400 narrow looms, and a full complement of other machinery, located in Piedmont Section of South. Splendid environment for successful operation. Labor conditions good. Has earned profits of \$2,800,000 in past five years. Price \$32.00 per spindle. Communicate with our attorney.

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What should be done about the matter?

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These looms are in first class condition and can be inspected at the mill.

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1—78" x 20' 125-lbs. working Pressure,
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Many smaller sizes,

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- 1—250 hp. Allis-Chalmers, brand new, 3-ph., 60-cy., 2200 volts, 514 r.p.m., slip-ring induction motor, with Westinghouse primary, Cutler-Hammer secondary starter.
- 1—250 hp. Allis-Chalmers, 3-ph., 60-cy., 2200 volts, 870 r.p.m., slip-ring induction motor, with Westinghouse primary and Cutler-Hammer secondary starter.
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- 200 Motors, ranging from 7 1/2 to 75 hp., 3-ph., 60-cy., 550 volts, 40-degree motors, with controllers, at prices which will enable dealers with rebuilding-shop facilities to purchase, rebuild and sell at a profit. Detailed list mailed upon request.

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- 1—200 kw. G. E., 3-ph., 25-cy., 6000 volts to 3-ph., 60-cy., 2400 volts, 750 r.p.m., four bearing; can be separated, making 2 motors.
- 1—400 kw. G. E., same as above, 375 r.p.m.
- 1—500 kw. G. E., same as above, 375 r.p.m.
- 2—1250 kva. G. E. 3-ph., 25-cy., 6600 volts, 375 r.p.m. motor type ATI to AC generator AQB, 5400/2700 volts, now 2-ph., reconnectable for 3-ph., 2300 volts, 62 1/2-cy., with direct connected exciter. Located near New York.
- 1—500 Kva. Westinghouse 3-ph., 25-cy., 6000 volts, 375 r.p.m. motor, to 2-ph., 62 1/2-cy., 2700 volts generator, reconnectable for 3-ph., no exciter. Located near New York.
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- 1—100 kw. Westinghouse 125/250 volt DC, 1100 r.p.m. generator with 150 hp. Westinghouse 550 volt DC motor, 1100 r.p.m. with panels. Located Cincinnati.

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- 2—480 hp. Sterling Water Tube, code built, 160-lb. working pressure, hand-fired grates, complete with all fittings.
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- 20—250 hp. Wickes, with stokers and all fittings; excellent condition. These boilers can go into Michigan or any other State.

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- 4—300 kw. G. E., 3-ph., 25-cy., 80 volts to 125 volts, DC 750 r.p.m. with 150 kva. transformers, 6000 volts to 83 volts—3 air cooled, one oil cooled. Located near New York.

FOR SALE

- 1—400 H. P. Rust Water-tube Boiler, complete, with stokers.
- 2—350 H. P. Vogt Water-tube Boilers, complete, with stokers.
- 2—300 H. P. Heine Water-tube Boilers, hand fired.
- 1—800 H. P. Springfield Scotch Type Boiler.
- 1—12 1/2" x 18" H. & T., lap side seam, triple riveted.
- 1—40" x 18" H. & T., butt joint, triple riveted.

CHAS. T. LEHMAN - Birmingham, Ala.

GAS ENGINES FOR SALE

1—4 cylinder 100 H. P. Bruce-MacBeth Gas Engine complete with air compressor and starter, direct connected to General Electric D. C. Generator—125 Volts—400 Amperes—with switch board, etc. Used four years. Price \$1500.00 f. o. b. Wheeling

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3—230 H. P. B. & W. Boilers, 160-lbs.

Complete With Grates and Fittings.

\$8.00 Per H. P.

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Prompt Deliveries

New and Rebuilt Full Diesel Type Oil Engines

- 2—450 B. H. P., vert., 6 cyl., coupled to 3-ph. 60-cyc. A. C. generators.
- 1—450 B. H. P., vert., 6 cyl., belted.
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- 1—225 B. H. P., vert., 3 cyl., coupled to 200 K. W. A. 3-ph. 60-cyc. 2300-v. generator.
- 1—170 B. H. P., vert., 3 cyl., belted.
- 1—120 B. H. P., vert., 3 cyl., coupled to 85 K. W. 3-phase. 60 cyc. 2300-v. generator.
- 1—120 B. H. P., vert., 3 cyl., coupled or belted.

Semi-Diesel Oil Engines

- 1—60 B. H. P., vert., 2 cyl., beltd.
- 1—40 B. H. P., vert., 2 cyl., beltd.
- 2—25 B. H. P., horiz., F-M, type "Y" beltd.

Gas Engines

- 1—150 B. H. P., vert., 3 cyl., coupled to 100 K. W. 250-v. D. C. generator.
- 1—100 B. H. P., vert., 3 cyl., coupled to 62 1/2 K. W. 125-250-v. D. C. generator.

Above only partial list—write or wire us full details your requirements.

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Specialist in Diesel Oil and Internal

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Generator for lighting, 110 volts, and 80 H. P. Backus Gas Engine for city or producer gas; in A1 condition.

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Just Taken Out of Service Rock Bottom Prices for Quick Sale

SIX—382 Hp. STERLING WATER TUBE BOILERS

Type 22-K. Complete with all fixtures and fittings. Green chain grate stokers operated at 150 lb. pressure.

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Two 400 Hp. Erie City Vertical Boilers—150 lb. A. S. M. E.

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2-400 K. W. DIRECT CURRENT GENERATORS, Direct Connected to Heavy-duty Rolling-Mill type CORLISS ENGINES.

Can be operated condensing or non-condensing. Capable of 100% overload. Also:

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Complete Power Plants Designed and Erected

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Engineers**

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2-60 H. P. 220 volt, 40°, 865 RPM, A. C. Allis-Chalmers Induction Motors. Less rails and pulleys.

2-16x12 Boston Type Positive Blowers, mounted on C. I. frame.

2-10-ton Holt Caterpillar Tractors.

1-3x4 Regular Fitted Horiz. Power Pump, Gardner, equipped with 5 H. P. 3-phase, 60-cycle, 200-volt, Allis-Chalmers Motor.

1-18"x10"x40" Condenser Box, made of 1/4" material.

48-8" O. P. C. I. Flanged Return Bends.

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ELECTRICAL REPAIR SHOPS

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1-75 H. P. 1,200 RPM., 3 phase, 220 volt, 60 cycle, Westinghouse, CCL vertical motor, with compensator.

1-70 H. P., 225/450 RPM. 250 volt D. C. General Electric C.L.C. Form B, variable speed motor, with control panel, base and pulley, nearly new. Low price. Large stock of Motors and Generators, A.C. and D.C.

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1734 POWERS ST. CINCINNATI, OHIO

Our Shops and Experience are at your service

A. C. GENERATORS.

1-625 K.V.A. Westinghouse-Parsons, 3 phase, 60 cycle, 230 volt Turbo Generator Set, non-condensing.

1-450 K.V.A. General Electric, 3 phase, 60 cycle, 2300 volt Generator direct connected to a 23x26 Skinner Auto. Engine.

1-375 K.V.A. Allis-Chalmers, 3 phase, 60 cycle, 4000, 2300, 480 or 240 volt, 160 R.P.M. Generator, direct connected to a 21x30 Fleming-Harrisburg Corliss Valve Engine.

1-300 K.W. General Electric, 3 phase, 60 cycle, 2300 volt, 3600 R.P.M. Horizontal Turbo-Generator Set, condensing.

2-200 K.W. Delaval Bullock, 3 phase, 60 cycle, 220-440 volt Turbo-Generator Sets, condensing.

1-150 K.V.A. Allis-Chalmers, 3 phase, 60 cycle, 2300 volt, 150 R.P.M. Generator, direct connected to a 14x30 Allis-Chalmers heavy duty Corliss Engine.

1-100 K.W. General Electric, 3 phase, 60 cycle, 220 volt, 3600 R.P.M., horizontal Turbo-Generator Set, condensing.

D. C. GENERATORS.

1-150 K.W. Northern, 250 volt Generator, direct connected to an 18x18 Skinner Auto. Engine.

1-100 K. W. Bullock 125 volt Generator, direct connected to a 16x15 Skinner Automatic Engine. (Can also be furnished for 250 volts.)

1-100 K.W. Triumph 125 volt, 675 R.P.M. belted type Generator.

1-50 K.W. Allis-Chalmers 250 volt Generator, direct connected to a 12x12 Erie Ball Automatic Engine.

1-35 K.W. Triumph 125 volt Generator, direct connected to a 11x12 Skinner Automatic Engine.

1-22 1/2 K.W. Allis-Chalmers, 120 volt, 925 R.P.M. belted type Generator.

BOILERS.

10-1040 H.P. Edgemore, 200 lb. pressure.

4-823 H.P. Sterling, 200 lb. pressure.

2-500 H.P. Keeler, 165 lb. pressure.

4-350 H.P. Sterling, 190 lb. pressure.

2-250 H.P. B. & W. 150 lb. pressure.

2-175 H.P. Atlas, 150 lb. pressure.

1-207 H.P. Geary, 170 lb. pressure.

3-200 H.P. 84x18 high pressure, H.R.T.

4-150 H.P. 72x18 high pressure, H.R.T.

1-125 H.P. 72x16 high pressure, H.R.T.

2-100 H.P. 66x16 high pressure, H.R.T.

1-80 H.P. 60x16 high pressure, H.R.T.

1-60 H.P. 54x14 high pressure, H.R.T.

1-50 H.P. 48x14 standard, H.R.T.

2-25 H.P. 42x95 new vertical, 125 lb.

1-15 H.P. 36x83 new vertical, 100 lb.

1-10 H.P. 30x83 new vertical, 100 lb.

ENGINES.

1-17x34x48 Hamilton Cross compound heavy duty Corliss designed for rope drive.

1-16x34x48 Hamilton Tandem compound heavy duty Corliss, designed for rope drive.

5-18x36 Allis-Chalmers heavy duty Corliss.

1-16x22 Houston, Stanwood & Gamble Slide Valve.

1-16x42 Allis girder frame Corliss.

1-14x18 Erie City Iron Works automatic.

1-14x16 Brownell Slide Valve.

1-13x16 Erie City Iron Works automatic.

1-13x16 Chandler & Taylor slide valve.

1-12x12 Erie City Iron Works automatic.

1-10x12 Chandler & Taylor.

1-9x9 Industrial Vertical.

1-6x6 Nagle Vertical.

1-5x5 Nagle Vertical.

HARRIS BROTHERS COMPANY offers—

Guaranteed Machinery and Equipment

AVAILABLE AT ONCE

BOILERS

1-150 hp. Internal Fired Marine Type, 125 lb. pressure.

1-100 hp. 60 in. x 18 ft. Horizontal Tubular, 115 lb. pressure.

1-80 hp. 60 in. x 16 ft. Horizontal Tubular, 115 lb. pressure.

2-150 hp. 66 in. x 20 ft. Horizontal Tubular, 125 lb. pressure.

2-100 hp. Scotch Marine, 100 lb. pressure.

2-45 hp. Vertical Tubular, 90 lb. pressure.

2-25 hp. Vertical Tubular, 90 lb. pressure.

5000-3 in. Boiler Tubes, 20 ft. long, brand new.

6000-2 ft. Boiler Tubes, in various lengths, brand new.

PIPE

50,000 ft. 6 in. with couplings, excellent condition.

8,000 ft. 20 in. A. & R. Spiral riveted 17 ft. to 25 ft., plain ends or Root couplings.

8,900 ft. 3-4 in. to 12 in., complete with threads and couplings.

CRANES

8-Brand New No. 2 portable cranes, 6 ft. 6 in. high, lift 5 ft. 4 in., overhang 2 ft. 6 in.

Lifting capacity 4000 lb.

4-Brand New No. 3 portable cranes, 7 ft. 6 in. high, lift 6 ft. 4 in., overhang 2 ft. 9 in.

Lifting capacity 5000 lb.

HOISTING ENGINES

1-9 x 10 in. Russell, double cylinder, double drum Hoisting Engine, heavy duty type, without boiler.

4-7 1-2 x 10 in., double cylinder, single geared Drum Hoisting Engine, with reversing throttle valves.

STEAM SHOVELS

6-85-ton Bucyrus Railroad Type, 5-yd. dipper; 90 per cent new.

10-70-ton Bucyrus Railroad Type, 2 1-2 to 3-yd. dipper; 90 per cent new.

1-American Ditcher (can be used for excavating or as locomotive crane).

STEAM ENGINES

10-9 x 6 vertical plain slide valve.

15-9 x 9 vertical plain slide valve.

GENERATORS AND MOTORS

7-Westinghouse, 250 hp. Motors, Type C.C.I. 440 volt, 60 cycle, 3 phase motors, speed 514 r.p.m., with base and starters. Can be furnished with pulleys or Flange Coupling.

1-150 kw. Crocker-Wheeler Generator, 115 volt, D.C., Belted.

1-60 kw. Triumph Generator, 125 volt, D. C., Belted.

1-300 kw. G. E. Rotary Converter, 25 cycle.

1-250 kw. General Elec. Generator, 440 volt, 3 phase, 60 cycle. Direct connected to McEwen Steam Engine.

AIR COMPRESSORS

1-450 ft. cap. Ingersoll 2 stage, belt driven Air Compressor, 100 lb. pressure.

1-1500 ft. Class W. B. 2. Sullivan Steam driven Air Compressor, 100 lb. pressure.

2-Single Tandem Fuel Oil Driven Compressors, Chgo. Pneumatic Tool Co., No. 8. O. 2.

STONE CRUSHERS

1-Reliance 12 x 24 in. Jaw Crusher.

2-Kent Crushing and Pulverizing Mills.

1-10 x 16 Buchanan Rock and Ore Crusher.

1-24 x 14 Type "C" Buchanan Crusher

1-8 in. x 12 in. Allis-Chalmers Jaw Crusher

CONCRETE MIXERS

1-No. 1 Chicago Concrete Batch Mixer, 10 cu. ft. capacity, with steam engine and boiler mounted on wheels.

1-Smith Gasoline Engine Power driven—portable—mounted on structural steel trucks, with feed chute, capacity about 6 cubic feet un-mixed material per batch.

1-S. S. S. Concrete gasoline engine power—portable—mounted on structural steel trucks, with chute capacity about 7 cubic feet un-mixed material per batch.

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17-1-2 yd. Bottom Concrete Carts.

50-1 1-2 yd. All-Steel Bottom Dump Buckets.

27-Hydraulic Tunnel Jacks, 3 1-2 in. diam. ram, 32 in. stroke.

75-tons brand new—2 ft. x 4 ft. x 3-16 in. checkered design Floor Plates.

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12x30 Right Hand Hamilton-Corliss Engine.
Good Operative Condition.
For quick sale \$500.00 f. o. b. cars Richmond, Va.

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New and Re-built Machinery. Belting a Specialty.

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1—25 KW General Electric, 3 phase, 60 cycles, 110 volts, 1,800 R. P. M.
1—150 KW Western Electric, 3 phase, 60 cycles, 2,300 volts, 900 R. P. M.
1—300 KW Westinghouse, three bearing type, 3 phase, 60 cycles, 2,300 volts, 514 R. P. M.

**A. C. MOTORS
3 PHASE, 60 CYCLES**

1—15 H. P. Allis-Chalmers, 220 volts, 1,800 R. P. M.
1—15 H. P. General Electric, 220 volts, 1,800 R. P. M.
3—20 H. P. Allis-Chalmers, 22 volts, 860 R. P. M.
1—60 H. P. General Electric, slip ring, 2,200 volts, 1,150 R. P. M.
1—75 H. P. Westinghouse, 220-440 volts, 860 R. P. M.
1—100 H. P. Westinghouse, 220-440 volts, 860 R. P. M.

The above complete and in first-class operative condition.

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1—125 K. W. G. E. 110 V. generator, direct connected to Phoenix engine.

1—75 K. W. Westinghouse 110 V. generator, direct connected to Ball engine.

1—50 K. W. Westinghouse 110 V. generator, direct connected to Ball engine.

8—250-264 H. P. B. & W. boilers, 154 lbs. pressure, equipped with Roney stokers, brachings, and all fittings.

Motors, Generators, Gas Engines, Air Compressors, Ice Machines.

1-4 HP WAGNER MOTORS

Brand New

\$23.50 EACH

These are single phase, 60 cycle, 110 volt, 1725 r. p. m., complete with cord, plug and flat steel pulley. Weight 40 pounds. Shaft $\frac{5}{8}$ " (keyseated). We have testimonials as to their sturdiness and overload capacity.

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Dynamos and Motors In Stock.

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GASKILL HIGH DUTY PUMPING ENGINES

Duplex, Horizontal, Fly Wheel Type, Water Cylinder Diameter 19 $\frac{1}{2}$ " : Length of Stroke, 20"; Maximum R. P. M. 30.

Pump has been recently overhauled and is in good condition. Must be removed to make room for new equipment.

Pump may be seen at Moore's Bridges Pumping Station, Norfolk, Virginia.

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Engineer Water and Sewers.

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Immediate Delivery. Large Stock,
Three Phase and Single Phase, Sizes $\frac{1}{2}$ to 50 H. P.
Send Us Your Inquiries Before You Buy.

SEEGER MACHINE TOOL COMPANY,
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REDUCED PRICES

3 PHASE, 60 CYCLES, 220 VOLT MOTORS

H.P.	R.P.M.	Make
1	1800	Howell
1 $\frac{1}{2}$	1800	Westinghouse
3	1800	Howell
6	1800	Howell
15	1800	Howell
30	865	General Elec.
50	860	Westinghouse

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Electrical Power Equipment

YORK, PENNSYLVANIA

CASILE & WILSON,

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PITTSBURGH, PA.

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1—100 H. P. Crocker-Wheeler, 2200 volts, 60-cycle, 3-phase, slip-ring, 690 R. P. M.

GENERATORS

1—150 K. W. D. C. Crocker-Wheeler, 250 volts, 200 R. P. M., engine type.

1—200 K. W. D. C. General Electric, 200 R. P. M., 3-wire, 125 to 250 volts, with engine.

1—250 K. W. Bullock, 220-250 volts, direct current, 450 R. P. M., 3-bearing.

ENGINES

13 and 22 $\frac{1}{2}$ x30" Buckeye 16 $\frac{1}{2}$ x30" Buckeye
12x16" Buckeye. 12 and 21 x27" Buckeye 18 $\frac{3}{4}$ x24" Buckeye

WATER TUBE BOILERS

4—264 H. P. B. & W., 160 lbs., Ohio.

3—250 H. P. Franklin, 125 lbs. pressure.

1—400 H. P. B. & W., 150 lbs., Iowa.

AIR COMPRESSORS

1—18x18" Duplex, belt-driven. 2—23 and 13x20" Sullivan, belt-driven.

Other steam and belt-driven compressors on demand.

CONDENSER

1—12 and 20x21 Blake Single-cylinder Jet Condenser, brass fitted.

TURBINES

3—75 K. W. 250-volt D. C. General Electric Generator, direct connected to Curtis turbine, 150 lbs. working pressure, complete with oiling system and switchboard.

PLANERS

1—Patch straight side, 6' x 18" x 12" bed.

1—Patch straight or circular, 7' to 75' radius.

BOILERS

1—75 H. P. Economic Type Boiler, 100 lbs. pressure.

4—150 H. P. R. T., 125 lbs. pressure.

1—100 H. P. Economic Boiler, 100 lbs. pressure.

CRUSHER

1—Sturtevant Roll Jaw, size 6" x 15".

ROLLS

1—Sturtevant Balance Roll, size 20" x 14".

LATHES

10—19x3 Le Blond, double back geared, quick change, belt driven.

HOISTING ENGINES

1—20 H. P. Mead-Morrison Bridge Hoist.

1—40 H. P. S. D., 220-volt, D. C. Lidgerwood Builders' Hoist.

1—8 $\frac{1}{4}$ x10 S. S. S. D. Lidgerwood, with boiler.

2—7 $\frac{1}{4}$ x10 D. C. D. National, with boiler.

2—7 $\frac{1}{4}$ x10 D. C. D. Mundy, with boiler.

AIR COMPRESSORS

1—350-ft. Air, Bury, steam.

1—1000-ft. Air, Sullivan.

1—60-ft. Air, Nagle, new, belted.

1—175-ft. Air, Ingersoll, steam.

1—190-ft. Air, American, steam.

PUMPS

1—1000-gal. Knowles Single.

1—750-gal. Worthington Duplex.

1—500-gal. Advance Duplex.

40—Scranton, size 6x5 $\frac{1}{2}$ x6, new.

DRYER

1—Louisville Steam Dryer, size 6' x 25'.

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CORPORATION**

BALTIMORE

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NEW MOTORS—Immediate Shipment

Quan.	H.P.	V.	R.P.M.	Type	Make
8	25	220	850	K	R. & M.
1	40	220	1200	B	Fairbanks-Morse.
1	40	220	1200	H	Fairbanks-Morse.
1	40	440	900	H	Fairbanks-Morse.
1	50	440	900	H	Fairbanks-Morse.
1	50	220	1200	H	Fairbanks-Morse.
1	50	440	850	AN	Allis-Chalmers.
1	75	440	900	B	Fairbanks-Morse.
1	75	220	865	AN	Allis-Chalmers.
1	150	2200	600	Q	Crocker-Wheeler.

GEO. F. MOTTER'S SONS

Steam and Electrical Engineers

YORK, PA.

PUMPS**Motor Driven Centrifugal:**

- 10—14-in. Worthington, Class B double suction 8,600 G. P. M. at 152 ft.
 4—14-in. Allis-Chalmers Type S. 3,750 G. P. M. at 130 ft.
 2—10-in. Allis Chalmers Type S. 3,750 G. P. M. at 130 ft.
 2—8-in. Allis Chalmers Type S. 1,850 G. P. M. at 150 ft.
 2—6-in. A. W. W., 1,000 G. P. M. at 125 lbs.

Steam Driven Centrifugal:

- 6—16-in. Allis Chalmers Type S. 8,500 G. P. M. at 90 ft.
 6—14-in. Allis Chalmers Type S. 6,500 G. P. M. at 150 ft.

Steam Driven Hydraulic:

- 6—14 & 20x7½x18 Worthington Compound Duplex, 400 G. P. M. at 300 lbs.
 10—25 & 38x4½x24 Worthington Tandem Duplex, 150 G. P. M. at 3,600 lbs.
 2—20x12x16 Worthington Duplex Fire Pumps, 1,500 G. P. M.

Boiler Feed Pumps:

- 200—New and used Worthington Boiler Feed Pumps, various sizes.
 Write for specifications and prices.

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MODERN PLANER
FINE CONDITION
ATTRACTIVE PRICE.

Sellers 48" x 48" Box Bed Heavy Duty Planer, platen 12' between pockets. Direct Motor Driven by 25 HP. Westinghouse 220 Volts DC. Motor. Air Clutch. Two Rail and two Side Heads.

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Pittsburgh, Pa.

MARINE COMPOUND ENGINE AND BOILER
 FOR SALE—Built by Pusey & Jones, 13 x 24 x 18 inches stroke; air pump attached to engine; circulator separate. ONE MARINE SCOTCH BOILER two (2) furnaces. 111" in diameter, 10' 6" long. In good condition. Will sell one or both cheap. Engine and boiler can be used in manufacturing plant.

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New Corliss Engines.

27—18x36 Heavy Duty, Allis-Chalmers Corliss Engines, both right hand and left hand. 350 H. P. at 125 r. p. m. 11 ft. by 32 inches. Band wheel. Operated on 140-lb. steam pressure, 1½ inch gauge back pressure, double eccentric.

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Steam and Mill Supplies, Pipe Fittings, Complete Power Plant Equipment, Manufacturers and Machinists, Refrigerating Engineers and Contractors.

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New and used, in all parts of the country
 Over 4,000 steel storage tanks.
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 Over 500 tanks with agitators, jackets, etc.
 Over 1,800 rectangular tanks.
 Over 1,500 glass enameled tanks.
 Over 1,200 steel pressure tanks.
 Over 15 tanks and towers.

We make lowest price on new tanks of any character or kind anywhere.
 Chemical and mechanical equipment.

Largest Dealers In Tanks.

THE CURTISS-WILLIS CO.,
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FUEL OIL USERS
TANKS

QUICK SHIPMENT

For Oil Storage and Similar Liquids.
 50" dia. x 5' 2" long, 500 gallons.
 50" dia. x 10' 1" long, 1,000 gallons.
 84" dia. x 32' 8½" long, 10,000 gallons.
 84" dia. x 35' 0" long, 10,000 gallons.
 78" dia. x 40' 0" long, 10,000 gallons.
 120" dia. x 16' 7½" long, 10,000 gallons.
 120" dia. x 10' 2½" long, 6,000 gallons.
 120" dia. x 13' 6½" long, 8,000 gallons.
 120" dia. x 15' 2½" long, 9,000 gallons.
 120" dia. x 20' 3½" long, 12,000 gallons.
 120" dia. x 25' 2½" long, 15,000 gallons.
 120" dia. x 26' 10" long, 16,000 gallons.
 120" dia. x 30' 2½" long, 18,000 gallons.
 120" dia. x 33' 5½" long, 20,000 gallons.
 120" dia. x 35' 2½" long, 21,000 gallons.
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2	No. 6 Buffalo "B" Volume Blowers.
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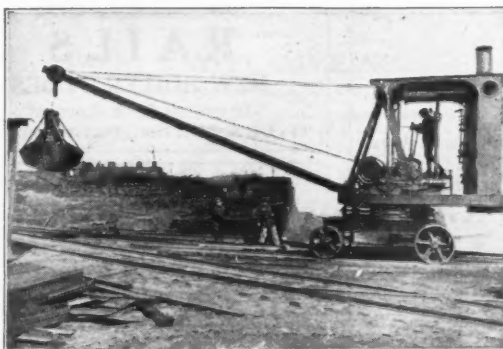
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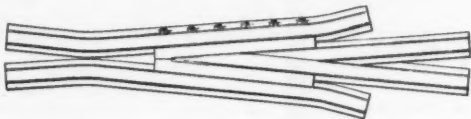
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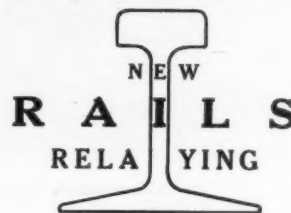
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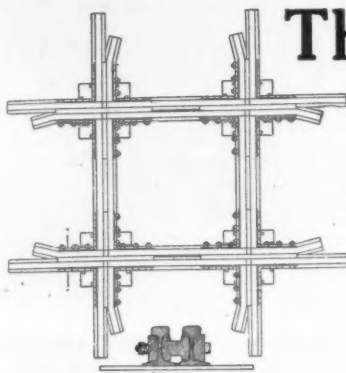
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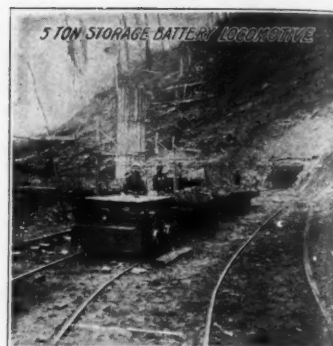
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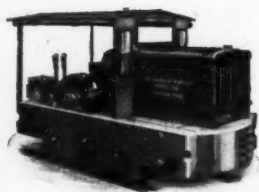
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We might talk forever about the merits
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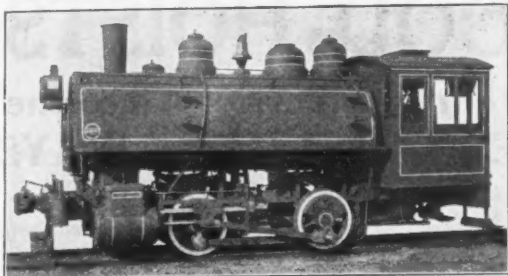
AMERICAN GASOLINE LOCOMOTIVE



and could tell you much that would be
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hear the man who has run one ragged
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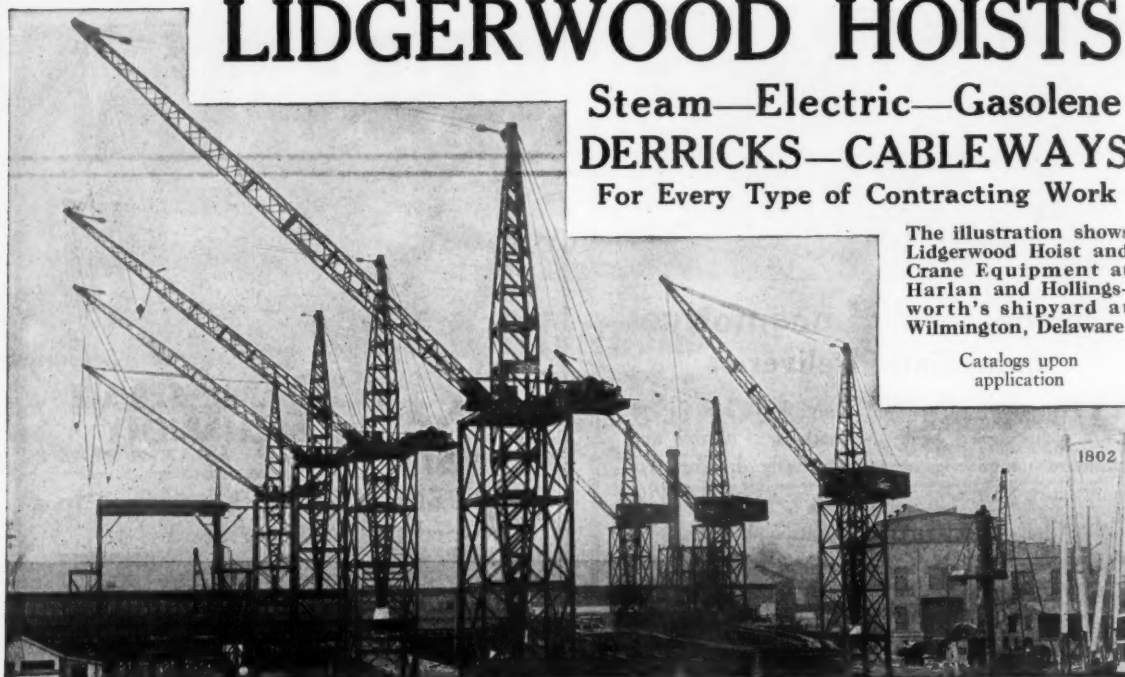
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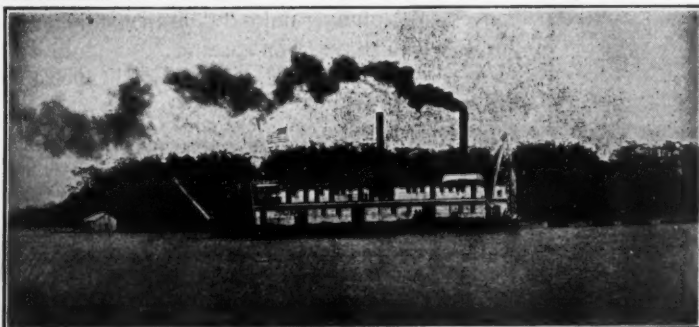
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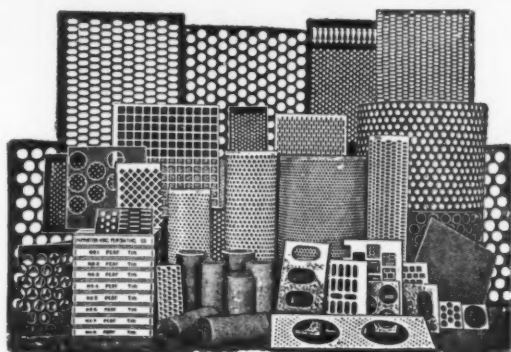
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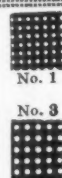
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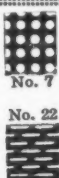
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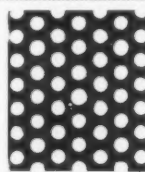
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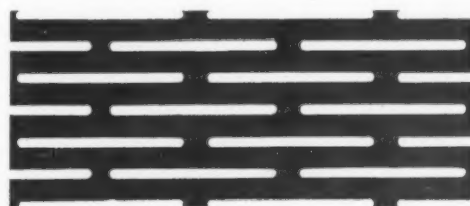
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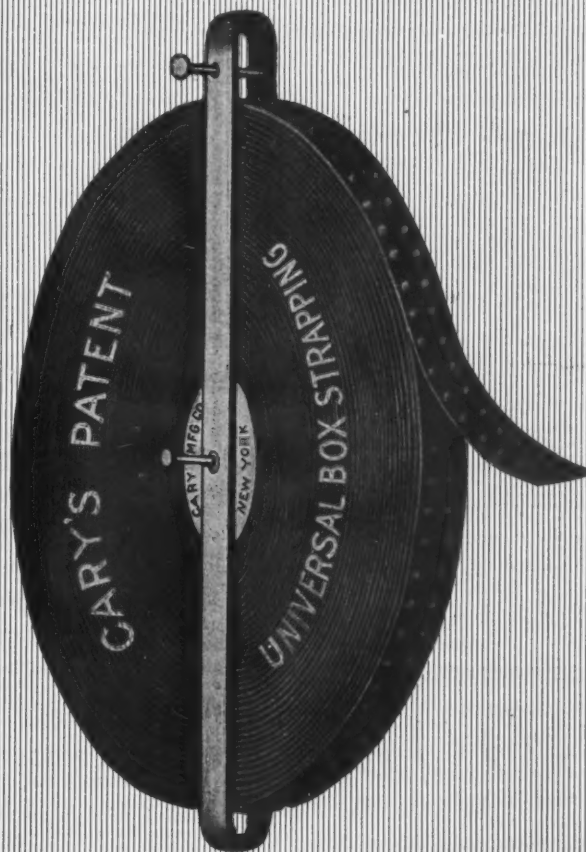
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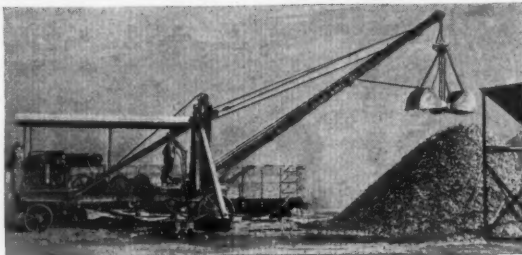
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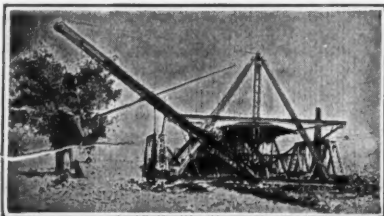
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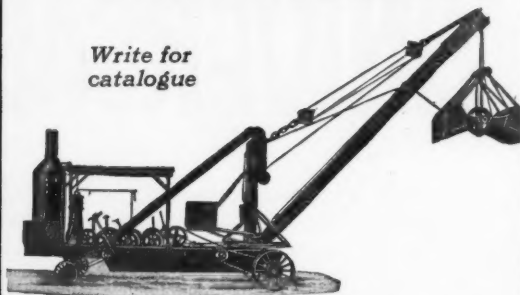
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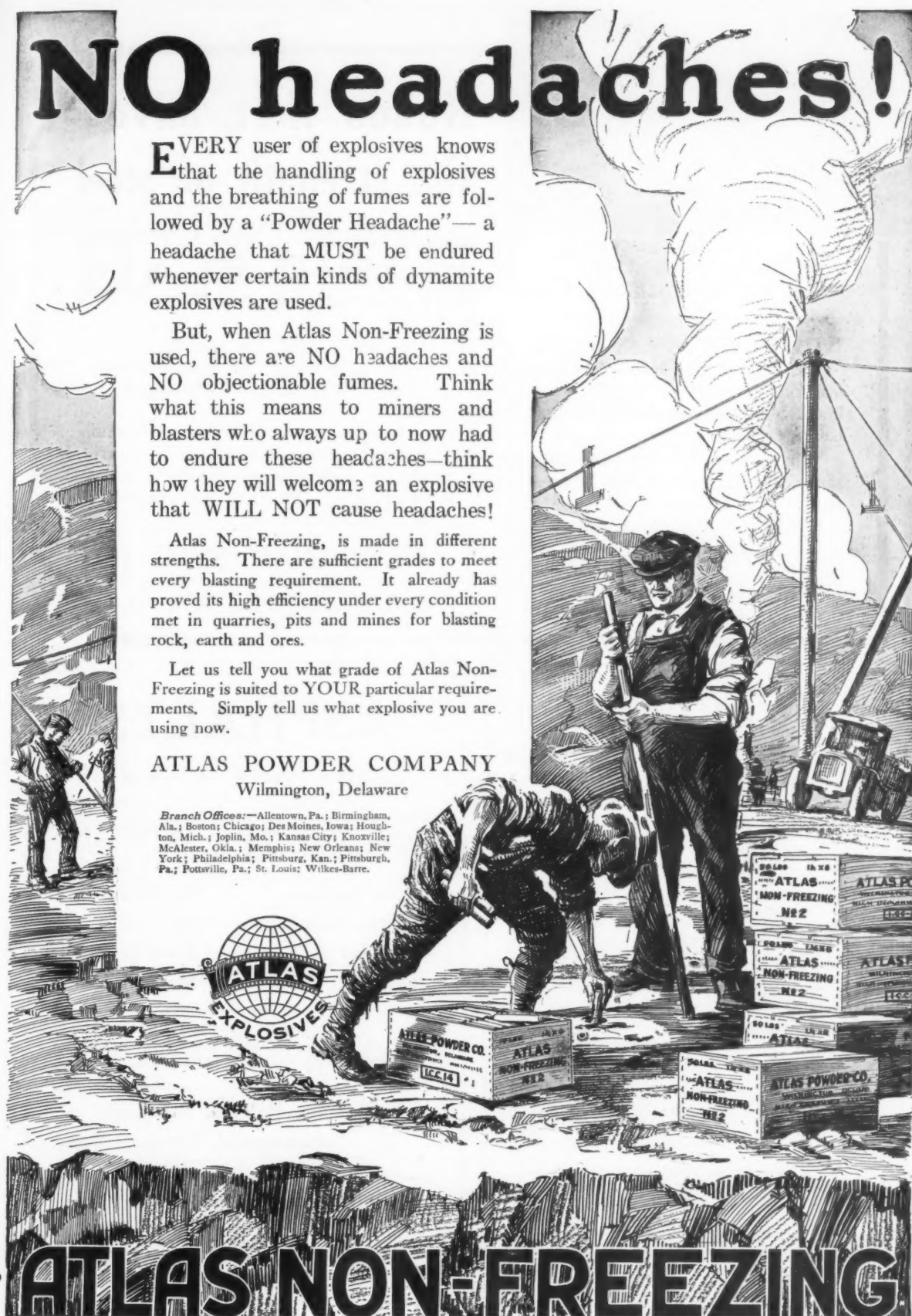
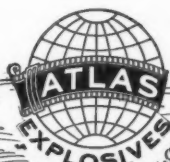
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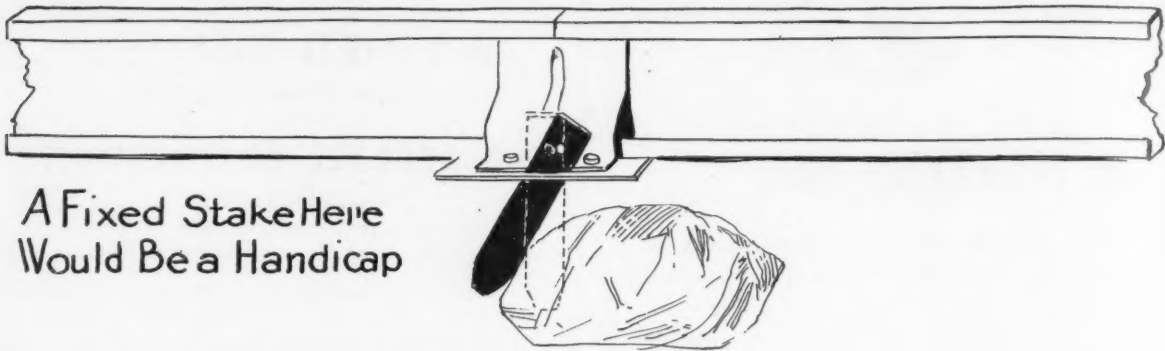
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May 14, 1921

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By Chas. P. Maloney, President.

CPM:EM

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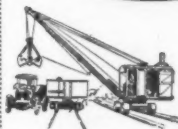
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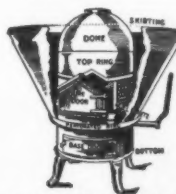
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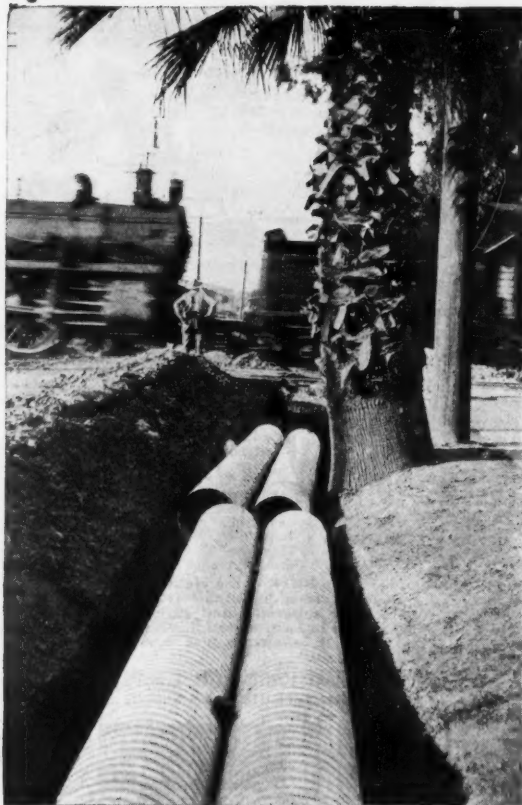
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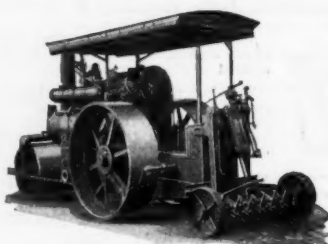
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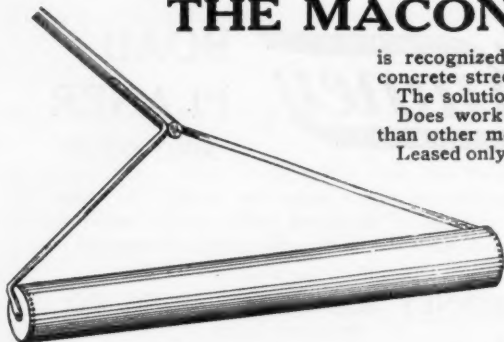
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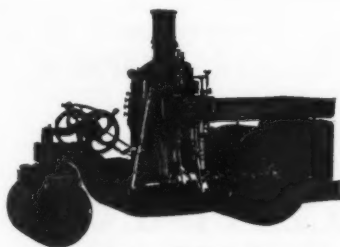
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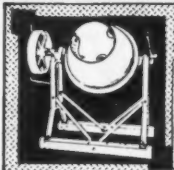
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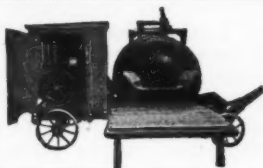
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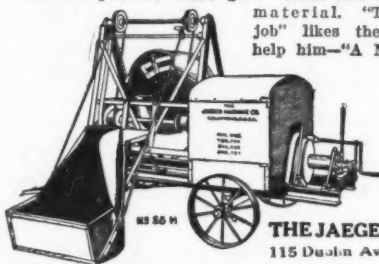
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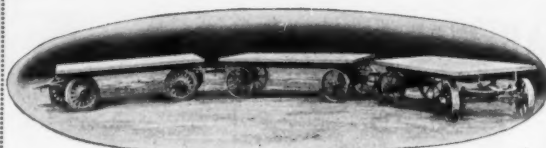
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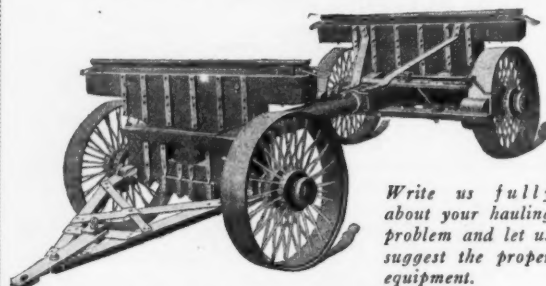
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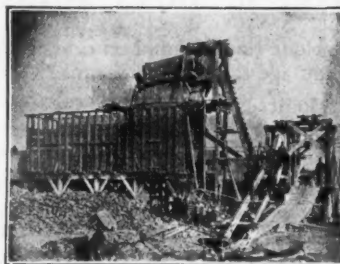
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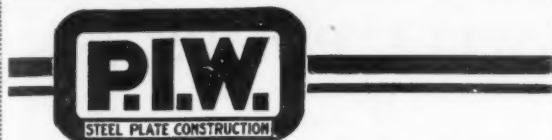
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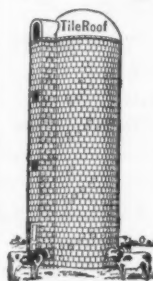
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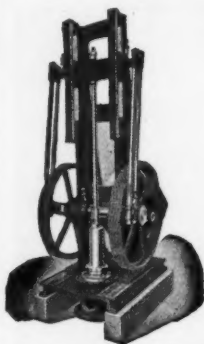
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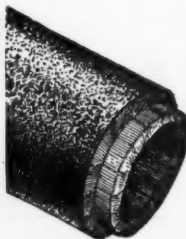
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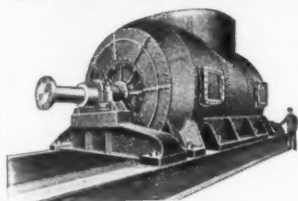


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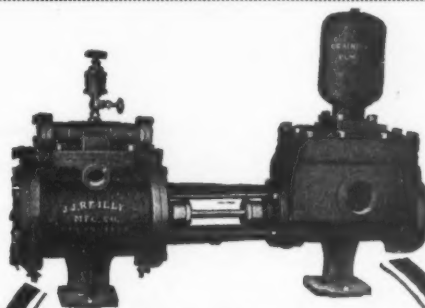
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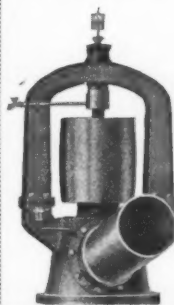
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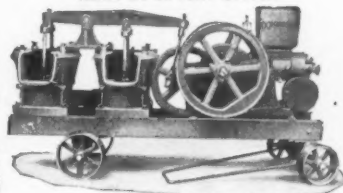
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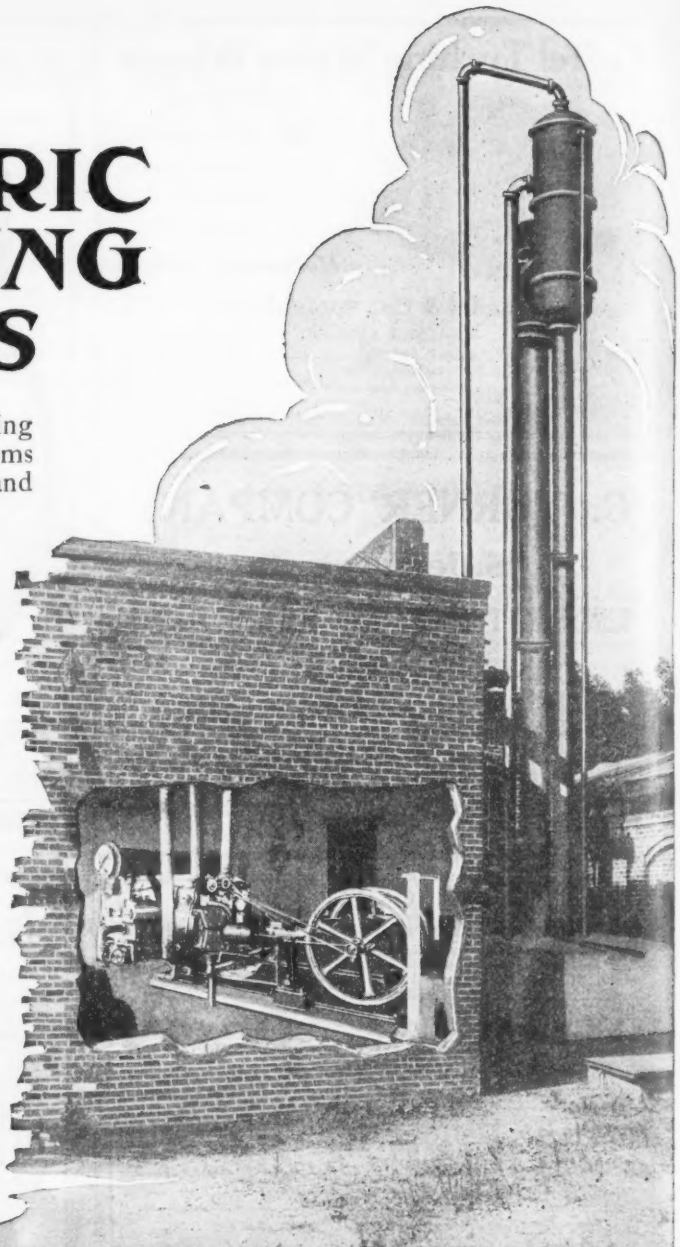
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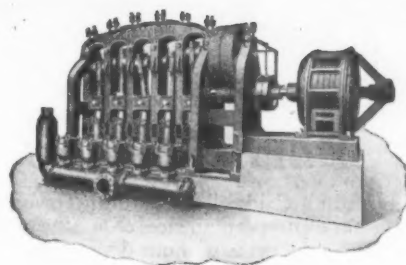
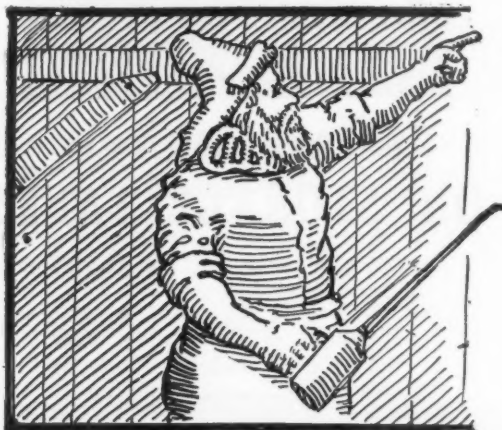
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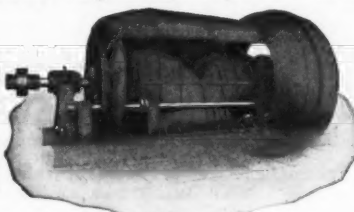
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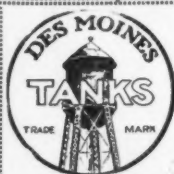
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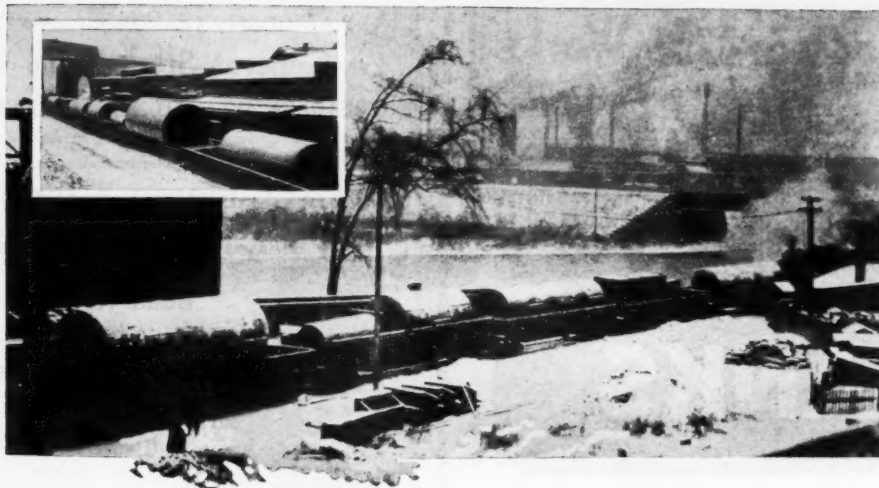
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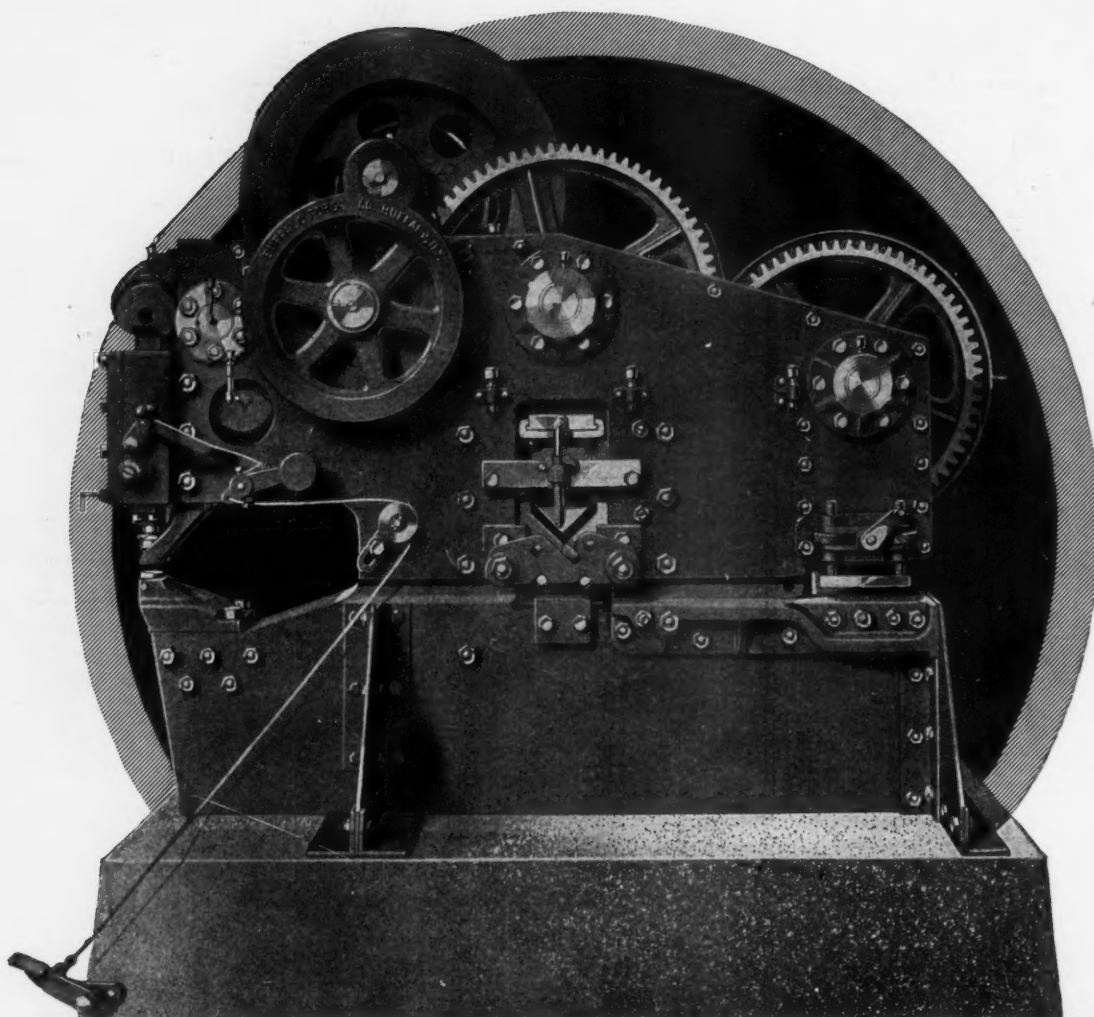
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Virginia Bridge & Iron Co., Roanoke, Va.
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- TWINE.**
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Whitlock Cordage Co., New York, N. Y.
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- Acid-proof.**
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- Gas Reversing.**
Morgan Construction Co., Worcester, Mass.
- Gate.**
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- VARIABLE-SPEED TRANSMISSION.**
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- VARNISH.**
Wadsworth, Howland & Co., Inc., Boston, Mass.
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Buckeye Blower Co., Columbus, O.
Buffalo Forge Co., Buffalo, N. Y.
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Edwards Mfg. Co., The, Cincinnati, O.
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Link-Belt Co., Philadelphia, Pa.
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- WASHERS AND GASKETS.** (Felt.)
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Sand and Gravel.
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Youngstown Sheet & Tube Co., Youngstown, O.
Fence.
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Insulated.
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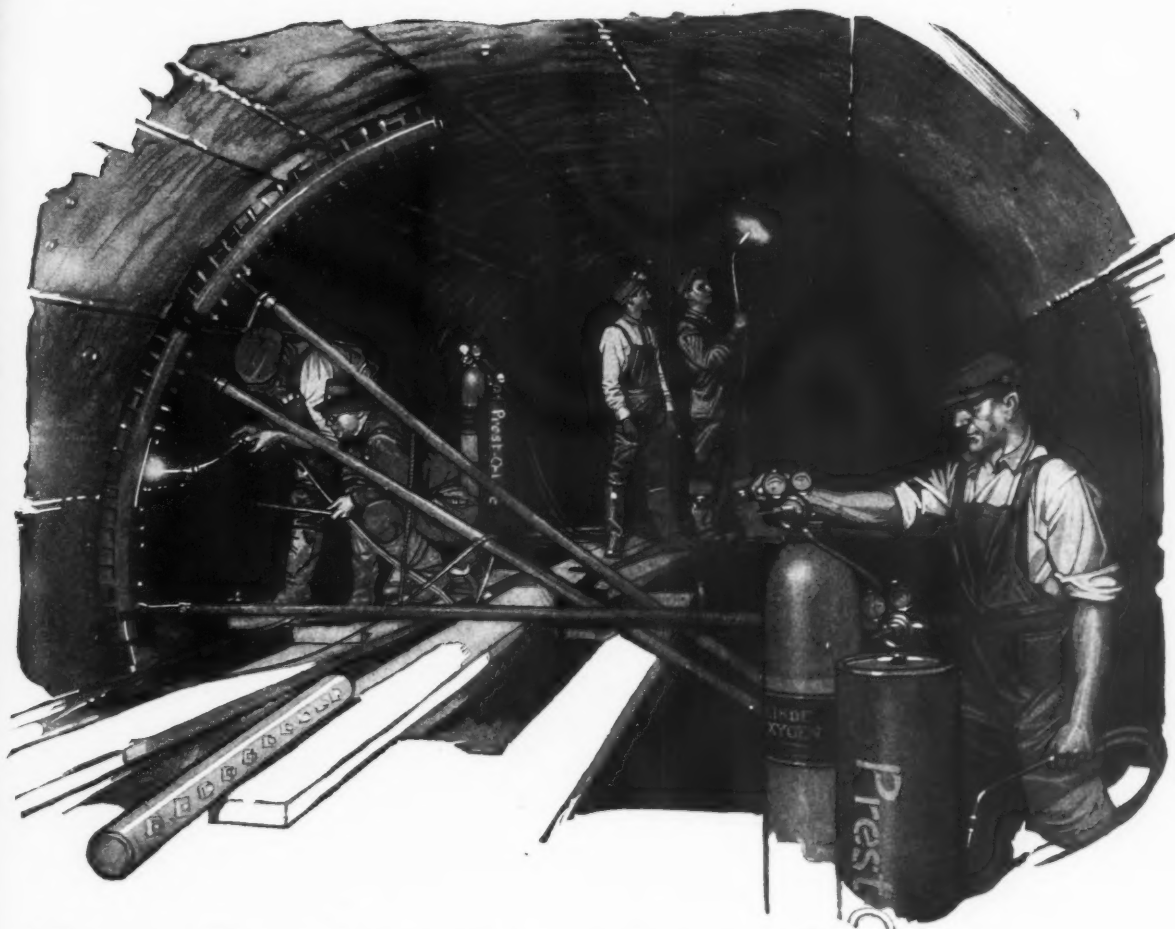
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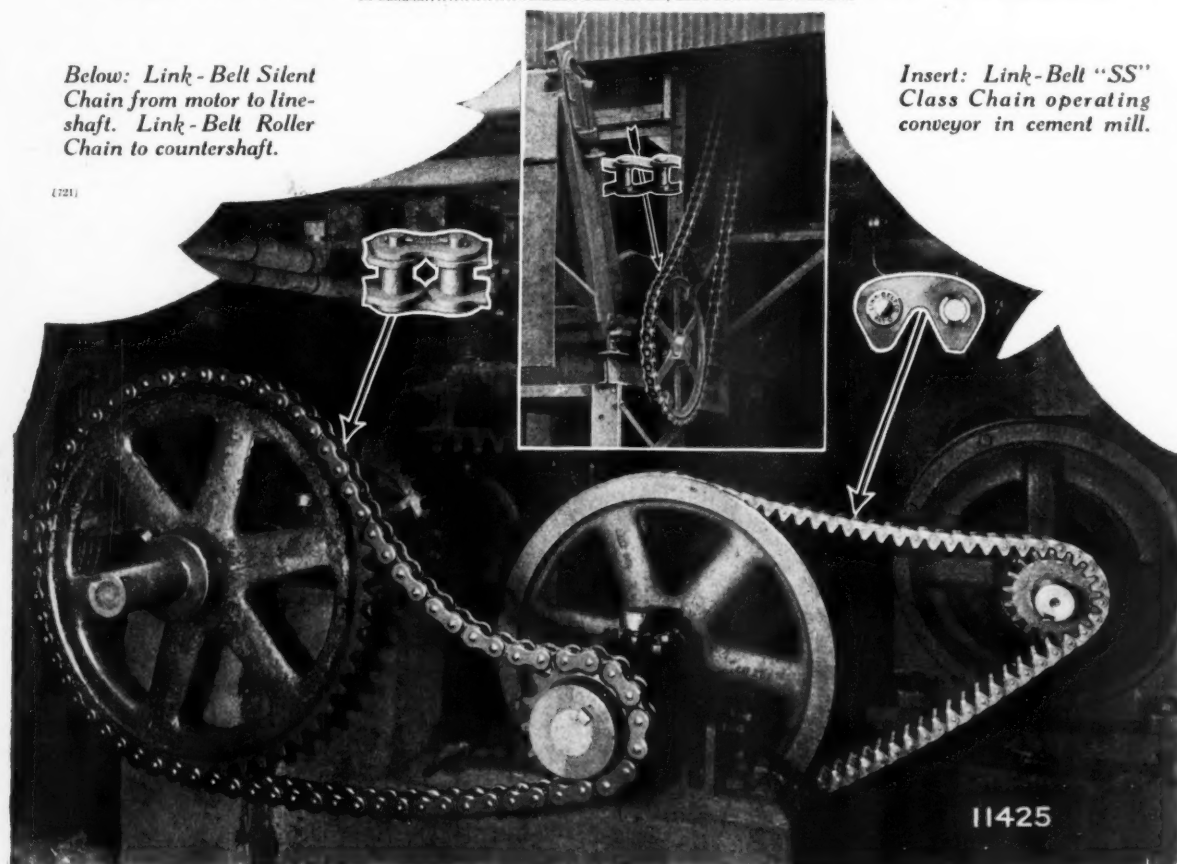
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11425